

July 11, 2011

Ms. Cindy Campisano  
Environmental Health & Engineering, Inc.  
117 Fourth Avenue  
Needham, MA 02494

## **LABORATORY REPORT**

Project: **EH&E/17228**  
Lab ID: **142678**  
Received: **06-15-11**

Dear Cindy:

Enclosed are the analytical results for the above referenced project. The project was processed for Standard turnaround.

This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. The analytical results relate only to the samples received. This report may only be used or reproduced in its entirety.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Karyn E. Raymond  
Project Manager

KER/ker

## Sample Receipt Report

Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Lab ID: **142678**

Delivery: **GWA Courier**  
 Airbill: **n/a**  
 Lab Receipt: **06-15-11**

Temperature: **2.8°C**  
 Chain of Custody: **Present**  
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-1	124581		Soil	6/13/2011 7:55	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028711	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-2	124582		Soil	6/13/2011 7:55	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028710	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-3	124583 MS		Soil	6/13/2011 7:55	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028712	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-4	124583 MSD		Soil	6/13/2011 7:55	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2019480	120 mL Amber Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-5	124584		Soil	6/13/2011 7:55	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028713	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-6	124585		Soil	6/13/2011 7:55	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028720	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-7	124586 MS		Soil	6/13/2011 7:55	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028719	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-8	124586 MSD		Soil	6/13/2011 7:55	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2019496	120 mL Amber Glass	n/a	n/a	NaOH	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-9	124587		Soil	6/13/2011 8:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028715	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-10	124588		Soil	6/13/2011 8:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028709	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-11	124589 MS		Soil	6/13/2011 8:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028708	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

### Sample Receipt Report (Continued)

Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Lab ID: **142678**

Delivery: **GWA Courier**  
 Airbill: **n/a**  
 Lab Receipt: **06-15-11**

Temperature: **2.8°C**  
 Chain of Custody: **Present**  
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-12	124589 MSD		Soil	6/13/2011 8:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2019495	120 mL Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-13	124590		Soil	6/13/2011 8:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2019494	120 mL Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-14	124591		Soil	6/13/2011 8:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028723	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-15	124592 MS		Soil	6/13/2011 8:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028714	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-16	124592 MSD		Soil	6/13/2011 8:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2019497	120 mL Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-17	124593		Soil	6/13/2011 8:30	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028718	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-18	124594		Soil	6/13/2011 8:30	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028717	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-19	124595		Soil	6/13/2011 8:45	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028619	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-20	124596		Soil	6/13/2011 8:45	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028611	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-21	124597		Soil	6/13/2011 8:50	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028721	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-22	124598		Soil	6/13/2011 8:55	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028722	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

### Sample Receipt Report (Continued)

Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Lab ID: **142678**

Delivery: **GWA Courier**  
 Airbill: **n/a**  
 Lab Receipt: **06-15-11**

Temperature: **2.8°C**  
 Chain of Custody: **Present**  
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-23	124599		Soil	6/13/2011 8:57	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028707	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-24	124600		Soil	6/13/2011 8:59	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028612	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-25	124601		Soil	6/13/2011 9:06	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028700	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-26	124602		Soil	6/13/2011 9:08	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028705	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-27	124603		Soil	6/13/2011 9:22	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028706	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-28	124604		Soil	6/13/2011 9:24	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028704	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-29	124605		Soil	6/13/2011 9:49	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028615	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-30	124606		Soil	6/13/2011 9:58	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028613	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-31	124607		Soil	6/13/2011 10:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028614	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-32	124608		Soil	6/13/2011 10:03	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028703	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-33	124609		Soil	6/13/2011 10:06	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028618	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

### Sample Receipt Report (Continued)

Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Lab ID: **142678**

Delivery: **GWA Courier**  
 Airbill: **n/a**  
 Lab Receipt: **06-15-11**

Temperature: **2.8°C**  
 Chain of Custody: **Present**  
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-34	124610		Soil	6/13/2011 10:08	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028702	120 mL Amber Glass	Proline	BX39300	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-35	124611		Soil	6/13/2011 10:23	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028616	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-36	124612		Soil	6/13/2011 10:23	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028617	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-37	124613 MS		Soil	6/13/2011 10:23	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028623	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-38	124613 MSD		Soil	6/13/2011 10:23	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2019498	120 mL Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-39	124614		Soil	6/13/2011 10:24	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028624	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-40	124615		Soil	6/13/2011 10:24	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028622	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-41	124616 MS		Soil	6/13/2011 10:28	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028625	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-42	124616 MSD		Soil	6/13/2011 10:28	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2019511	120 mL Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-43	124617		Soil	6/13/2011 10:28	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028621	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-44	124618		Soil	6/13/2011 10:45	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028627	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

### Sample Receipt Report (Continued)

Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Lab ID: **142678**

Delivery: **GWA Courier**  
 Airbill: **n/a**  
 Lab Receipt: **06-15-11**

Temperature: **2.8°C**  
 Chain of Custody: **Present**  
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-45	124619 MS		Soil	6/13/2011 10:45	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028626	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-46	124619 MSD		Soil	6/13/2011 10:45	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2019510	120 mL Amber Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-47	124620		Soil	6/13/2011 10:45	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028620	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-48	124621		Soil	6/13/2011 10:48	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028610	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-49	124624		Soil	6/13/2011 10:57	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028606	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-50	124627		Soil	6/13/2011 11:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028608	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-51	124628		Soil	6/13/2011 11:26	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028607	120 mL Amber Glass	Proline	BX39303	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-52	124631		Soil	6/13/2011 11:30	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028686	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-53	124634		Soil	6/13/2011 11:34	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028694	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-54	124637		Soil	6/13/2011 11:37	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028690	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-55	124640		Soil	6/13/2011 11:43	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028685	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		

### Sample Receipt Report (Continued)

Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Lab ID: **142678**

Delivery: **GWA Courier**  
 Airbill: **n/a**  
 Lab Receipt: **06-15-11**

Temperature: **2.8°C**  
 Chain of Custody: **Present**  
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-56	124643		Soil	6/14/2011 10:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028654	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-57	124644		Soil	6/14/2011 10:20	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028655	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-58	124645		Soil	6/14/2011 10:35	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028674	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-59	124646		Soil	6/14/2011 10:45	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028699	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-60	124647		Soil	6/14/2011 10:50	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028692	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-61	124648		Soil	6/14/2011 11:05	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028677	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-62	124649		Soil	6/14/2011 11:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028681	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-63	124650		Soil	6/14/2011 11:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028678	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-64	124651		Soil	6/14/2011 11:20	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028680	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-65	124652		Soil	6/14/2011 11:30	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028676	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-66	124653		Soil	6/14/2011 11:45	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028672	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		

## Sample Receipt Report (Continued)

Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Lab ID: **142678**

Delivery: **GWA Courier**  
 Airbill: **n/a**  
 Lab Receipt: **06-15-11**

Temperature: **2.8°C**  
 Chain of Custody: **Present**  
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-67	124654		Soil	6/14/2011 11:57	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028671	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-68	124655		Soil	6/14/2011 12:15	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028673	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-69	124346		Soil	6/14/2011 12:15	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028670	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-70	124347		Soil	6/14/2011 12:25	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028664	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-71	124348		Soil	6/14/2011 12:25	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028663	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-72	124349		Soil	6/14/2011 12:33	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028665	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-73	124350		Soil	6/14/2011 13:05	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028662	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-74	124351		Soil	6/14/2011 13:05	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028657	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-75	124352		Soil	6/14/2011 13:15	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028656	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-76	124353		Soil	6/14/2011 13:15	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028696	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-77	124354		Soil	6/14/2011 13:30	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028679	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		



### Sample Receipt Report (Continued)

Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Lab ID: **142678**

Delivery: **GWA Courier**  
 Airbill: **n/a**  
 Lab Receipt: **06-15-11**

Temperature: **2.8°C**  
 Chain of Custody: **Present**  
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-78	124355		Soil	6/14/2011 13:30	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028691	120 mL Amber Glass	Proline	BX39301	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-79	124356		Soil	6/14/2011 13:40	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028669	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-80	124357		Soil	6/14/2011 13:40	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028666	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-81	124358		Soil	6/14/2011 13:50	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028661	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-82	124359		Soil	6/14/2011 13:50	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028658	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-83	124360		Soil	6/14/2011 14:05	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028653	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-84	124361		Soil	6/14/2011 14:05	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028675	120 mL Amber Glass	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-85	124362		Soil	6/14/2011 14:25	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028634	120 mL Amber Glass	Proline	BX39294	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-86	124363		Soil	6/14/2011 14:25	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028639	120 mL Amber Glass	Proline	BX39294	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-87	124364		Soil	6/14/2011 14:30	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028635	120 mL Amber Glass	Proline	BX39294	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-88	124365		Soil	6/14/2011 14:35	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028642	120 mL Amber Glass	Proline	BX39294	None	n/a	n/a	n/a		

### Sample Receipt Report (Continued)

Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Lab ID: **142678**

Delivery: **GWA Courier**  
 Airbill: **n/a**  
 Lab Receipt: **06-15-11**

Temperature: **2.8°C**  
 Chain of Custody: **Present**  
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-89	124366		Soil	6/14/2011 14:52	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028667	120 mL Amber Glas	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-90	124367		Soil	6/14/2011 14:57	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028660	120 mL Amber Glas	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-91	124368		Soil	6/14/2011 15:05	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028659	120 mL Amber Glas	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-92	124369		Soil	6/14/2011 15:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2028652	120 mL Amber Glas	Proline	BX39302	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-93	124370		Aqueous	6/14/2011 14:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2033012	1 L Amber Glass	Proline	BX39211	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
142678-94	124371		Aqueous	6/14/2011 14:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Receipt	Notes
C2033011	1 L Amber Glass	Proline	BX39211	None	n/a	n/a	n/a		

## Data Certification

Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**

Lab ID: **142678**  
Received: **06-15-11 19:15**

Mass DEP Analytical Protocol Certification Form					
Project Location: <b>n/a</b>			MA DEP RTN: <b>n/a</b>		
<b>This Form provides certifications for the following data set:</b>					
EPA 8082: 142678-1 through -94					
Sample Matrices: Groundwater/Surface (X) Soil/Sediment (X) Drinking Water ( ) Air ( ) Other ( )					
<b>CAM Protocol</b> (check all that apply below):					
8260 VOC CAM II A ( )	7470/7471 Hg CAM III B ( )	Mass DEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	Mass DEP APH CAM IX A ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	Mass DEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D ( )	8082 PCB CAM V A (X)	9012 Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	
<b>An affirmative response to questions A through F are required for "Presumptive Certainty" status.</b>					
A.	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				Yes
B.	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				Yes
C.	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				Yes
D.	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				Yes
E.	<u>VPH, EPH and APH methods only:</u> Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).				NA
F.	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?				Yes
<b>Responses to questions G, H and I below are required for "Presumptive Certainty" status.</b>					
G.	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				No
<b>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.</b>					
H.	Were all QC performance standards specified in the CAM protocol(s) achieved?				No
I.	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes
<b>All negative responses must be addressed in an attached laboratory narrative.</b>					
<b>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</b>					
Signature: <i>Karyn E. Raymond</i>		Position: Project Manager			
Printed Name: Karyn E. Raymond		Date: 07-11-11			

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124581**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-01**  
 Sampled: **06-13-11 07:55**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-21-11 11:21**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **82**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	47
11104-28-2	Aroclor 1221	BRL		ug/Kg	47
11141-16-5	Aroclor 1232	BRL		ug/Kg	47
53469-21-9	Aroclor 1242	BRL		ug/Kg	47
12672-29-6	Aroclor 1248	BRL		ug/Kg	47
11097-69-1	Aroclor 1254	300	2C (290)*	ug/Kg	47
11096-82-5	Aroclor 1260	230	2C (170)*	ug/Kg	47
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	47
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	47

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	4	53 %	30 - 150 %
	Decachlorobiphenyl	8	5	63 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	4	53 %	30 - 150 %
	Decachlorobiphenyl	8	5	60 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124582**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-02**  
 Sampled: **06-13-11 07:55**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-21-11 11:54**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **82**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	47
11104-28-2	Aroclor 1221	BRL		ug/Kg	47
11141-16-5	Aroclor 1232	BRL		ug/Kg	47
53469-21-9	Aroclor 1242	BRL		ug/Kg	47
12672-29-6	Aroclor 1248	BRL		ug/Kg	47
11097-69-1	Aroclor 1254	500	1C (470)*	ug/Kg	47
11096-82-5	Aroclor 1260	360	2C (280)*	ug/Kg	47
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	47
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	47

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	79 %	30 - 150 %
	Decachlorobiphenyl	8	8	97 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	6	79 %	30 - 150 %
	Decachlorobiphenyl	8	7	91 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.  
 2C Concentration reported from second column.

## Matrix Spike and Matrix Spike Duplicate EPA Method 8082

Field ID:	<b>124581</b>	Laboratory ID:	<b>Parent Sample</b>	<b>Matrix Spike</b>	<b>Spike Duplicate</b>
Project:	<b>EH&amp;E/17228</b>	142678-01	142678-03	142678-04	
Client:	<b>Environmental Health &amp; Engineering, Inc.</b>	Sampled:	06-13-11 07:55	06-13-11 07:55	06-13-11 07:55
Matrix:	<b>Soil</b>	Received:	06-15-11 19:15	06-15-11 19:15	06-15-11 19:15
Container:	<b>120 mL Amber Glass</b>	Extracted:	06-16-11 14:15	06-16-11 14:15	06-16-11 14:15
Preservation:	<b>Cool</b>	Cleaned Up:	06-20-11 21:00	06-20-11 21:00	06-20-11 21:00
		Analyzed:	06-21-11 11:21	06-21-11 12:18	06-21-11 12:18
		Analyst:	CRL	CRL	CRL
		QC Batch ID:	PB-3757-X	PB-3757-X	PB-3757-X
		Instrument ID:	GC-11 Agilent 6890	GC-11 Agilent 6890	GC-11 Agilent 6890
		Sample Weight:	31g	30g	31g
		Final Volume:	1 mL	1 mL	1 mL
		Percent Solids:	82	82	82
		Dilution Factor:	1	1	1

CAS Number	Analyte	Unspiked Sample (ug/Kg)	MS Spiked (ug/Kg)	MS Measured		MS Recovery		MSD Spiked (ug/Kg)	MSD Measured		MSD Recovery		RPD		QC Limits	
				1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col		1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	BRL	200	190	210	95 %	104 %	200	220	240	111 %	120 %	14 %	13 %	40 - 140%	50 %
11096-82-5	Aroclor 1260	230	200	400	480	111 %	121 %	200	450	540	136 %	155 %	11 %	13 %	40 - 140%	50 %

QC Surrogate Compound	Surrogate Recovery													QC Limits	
Tetrachloro- <i>m</i> -xylene	53%	8	6	6	70%	69%	8	6	6	71%	71%			30 - 150 %	
Decachlorobiphenyl	63%	8	7	6	81%	80%	8	9	9	117%	109%			30 - 150 %	

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3546. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
s Result outside recommended limits due to analyte concentration native to the sample.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124584**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-05**  
Sampled: **06-13-11 07:55**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 17:30**  
Cleaned Up: **06-21-11 23:00**  
Analyzed: **06-22-11 03:00**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3758-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **89**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	<b>300</b>	2C (240)*	ug/Kg	45
11097-69-1	Aroclor 1254	<b>170</b>	2C (140)*	ug/Kg	45
11096-82-5	Aroclor 1260	BRL		ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>80</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>75</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>84</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>75</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124585**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-06**  
 Sampled: **06-13-11 07:55**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-21-11 13:05**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **88**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	44
11104-28-2	Aroclor 1221	BRL		ug/Kg	44
11141-16-5	Aroclor 1232	BRL		ug/Kg	44
53469-21-9	Aroclor 1242	BRL		ug/Kg	44
12672-29-6	Aroclor 1248	230	1C (210)*	ug/Kg	44
11097-69-1	Aroclor 1254	250	1C (190)*	ug/Kg	44
11096-82-5	Aroclor 1260	BRL		ug/Kg	44
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	44
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	44

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	84 %	30 - 150 %
	Decachlorobiphenyl	7	6	75 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	95 %	30 - 150 %
	Decachlorobiphenyl	7	5	72 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.



## Matrix Spike and Matrix Spike Duplicate EPA Method 8082

Field ID:	124584	Laboratory ID:	142678-05	142678-07	142678-08
Project:	EH&E/17228	Sampled:	06-13-11 07:55	06-13-11 07:55	06-13-11 07:55
Client:	Environmental Health & Engineering, Inc.	Received:	06-15-11 19:15	06-15-11 19:15	06-15-11 19:15
Matrix:	Soil	Extracted:	06-16-11 17:30	06-16-11 17:30	06-16-11 17:30
Container:	120 mL Amber Glass	Cleaned Up:	06-21-11 23:00	06-21-11 23:00	06-21-11 23:00
Preservation:	Cool	Analyzed:	06-22-11 03:00	06-22-11 03:23	06-22-11 03:47
		Analyst:	CRL	CRL	CRL
		QC Batch ID:	PB-3758-X	PB-3758-X	PB-3758-X
		Instrument ID:	GC-11 Agilent 6890	GC-11 Agilent 6890	GC-11 Agilent 6890
		Sample Weight:	30g	30g	31g
		Final Volume:	1 mL	1 mL	1 mL
		Percent Solids:	89	89	89
		Dilution Factor:	1	1	1

CAS Number	Analyte	Unspiked Sample (ug/Kg)	MS Spiked (ug/Kg)	MS Measured		MS Recovery		MSD Spiked (ug/Kg)	MSD Measured		MSD Recovery		RPD		QC Limits	
				1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col		1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	BRL	190	340	370	182 % m	201 % m	180	360	370	199 % m	202 % m	8 %	1 %	40 - 140%	50 %
11096-82-5	Aroclor 1260	BRL	190	230	280	125 %	150 % m	180	260	300	140 %	163 % m	10 %	7 %	40 - 140%	50 %

QC Surrogate Compound	Surrogate Recovery													QC Limits	
Tetrachloro- <i>m</i> -xylene	80%	7	6	6	82%	81%	7	6	6	85%	83%			30 - 150 %	
Decachlorobiphenyl	75%	7	7	8	100%	107%	7	7	9	98%	120%			30 - 150 %	

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3546. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
m Result outside recommended limits due to sample matrix interference.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124587**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-09**  
 Sampled: **06-13-11 08:10**  
 Received: **06-15-11 19:15**  
 Extracted: **06-21-11 13:30**  
 Cleaned Up: **06-24-11 15:00**  
 Analyzed: **06-24-11 18:57**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3760-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **87**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	BRL		ug/Kg	45
11097-69-1	Aroclor 1254	<b>170</b>	1C (130)*	ug/Kg	45
11096-82-5	Aroclor 1260	<b>110</b>	2C (69)*	ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	7	<b>92</b> %	30 - 150 %
	Decachlorobiphenyl	8	7	<b>97</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	7	<b>96</b> %	30 - 150 %
	Decachlorobiphenyl	8	8	<b>104</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124588**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-10**  
 Sampled: **06-13-11 08:10**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-21-11 13:29**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **88**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	BRL		ug/Kg	45
11097-69-1	Aroclor 1254	<b>210</b>	1C (180)*	ug/Kg	45
11096-82-5	Aroclor 1260	<b>130</b>	2C (94)*	ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>93</b> %	30 - 150 %
	Decachlorobiphenyl	7	8	<b>110</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>90</b> %	30 - 150 %
	Decachlorobiphenyl	7	8	<b>107</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.  
 2C Concentration reported from second column.

## Matrix Spike and Matrix Spike Duplicate EPA Method 8082

		Parent Sample	Matrix Spike	Spike Duplicate
Field ID:	124587	Laboratory ID: 142678-09	142678-11	142678-12
Project:	EH&E/17228	Sampled: 06-13-11 08:10	06-13-11 08:10	06-13-11 08:10
Client:	Environmental Health & Engineering, Inc.	Received: 06-15-11 19:15	06-15-11 19:15	06-15-11 19:15
Matrix:	Soil	Extracted: 06-21-11 13:30	06-21-11 13:30	06-21-11 13:30
Container:	120 mL Amber Glass	Cleaned Up: 06-24-11 15:00	06-24-11 15:00	06-24-11 15:00
Preservation:	Cool	Analyzed: 06-24-11 18:57	06-24-11 19:21	06-24-11 19:45
		Analyst: CRL	CRL	CRL
		QC Batch ID: PB-3760-X	PB-3760-X	PB-3760-X
		Instrument ID: GC-11 Agilent 6890	GC-11 Agilent 6890	GC-11 Agilent 6890
		Sample Weight: 31g	30g	31g
		Final Volume: 1 mL	1 mL	1 mL
		Percent Solids: 87	87	87
		Dilution Factor: 1	1	1

CAS Number	Analyte	Unspiked Sample (ug/Kg)	MS Spiked (ug/Kg)	MS Measured		MS Recovery		MSD Spiked (ug/Kg)	MSD Measured		MSD Recovery		RPD		QC Limits	
				1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	BRL	190	240	200	125 %	105 %	190	210	220	109 %	114 %	12 %	9 %	40 - 140%	50 %
11096-82-5	Aroclor 1260	110	190	260	290	101 %	93 %	190	260	320	100 %	109 %	1 %	11 %	40 - 140%	50 %

QC Surrogate Compound	Surrogate Recovery												QC Limits	
Tetrachloro- <i>m</i> -xylene	80%	8	6	7	77%	91%	8	6	7	81%	85%		30 - 150 %	
Decachlorobiphenyl	75%	8	7	7	90%	94%	8	7	8	96%	106%		30 - 150 %	

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3546. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124590**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-13**  
Sampled: **06-13-11 08:10**  
Received: **06-15-11 19:15**  
Extracted: **06-22-11 03:00**  
Cleaned Up: **06-25-11 18:00**  
Analyzed: **06-27-11 13:07**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3761-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **86**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	46
11104-28-2	Aroclor 1221	BRL		ug/Kg	46
11141-16-5	Aroclor 1232	BRL		ug/Kg	46
53469-21-9	Aroclor 1242	BRL		ug/Kg	46
12672-29-6	Aroclor 1248	BRL		ug/Kg	46
11097-69-1	Aroclor 1254	97	1C (63)*	ug/Kg	46
11096-82-5	Aroclor 1260	47	2C (34)*	ug/Kg	46
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	46
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	46

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	7	84 %	30 - 150 %
	Decachlorobiphenyl	8	7	94 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	6	83 %	30 - 150 %
	Decachlorobiphenyl	8	7	96 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124591**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-14**  
 Sampled: **06-13-11 08:10**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-21-11 13:52**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **88**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	44
11104-28-2	Aroclor 1221	BRL		ug/Kg	44
11141-16-5	Aroclor 1232	BRL		ug/Kg	44
53469-21-9	Aroclor 1242	BRL		ug/Kg	44
12672-29-6	Aroclor 1248	BRL		ug/Kg	44
11097-69-1	Aroclor 1254	80	1C (75)*	ug/Kg	44
11096-82-5	Aroclor 1260	58	2C (34)*	ug/Kg	44
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	44
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	44

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	77 %	30 - 150 %
	Decachlorobiphenyl	7	6	78 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	74 %	30 - 150 %
	Decachlorobiphenyl	7	6	83 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.  
 2C Concentration reported from second column.

## Matrix Spike and Matrix Spike Duplicate EPA Method 8082

Field ID:	<b>1245890</b>	Laboratory ID:	<b>Parent Sample</b>	<b>Matrix Spike</b>	<b>Spike Duplicate</b>
Project:	<b>EH&amp;E/17228</b>	Sampled:	142678-13	142678-15	142678-16
Client:	<b>Environmental Health &amp; Engineering, Inc.</b>	Received:	06-13-11 08:10	06-13-11 08:10	06-13-11 08:10
Matrix:	<b>Soil</b>	Extracted:	06-15-11 19:15	06-15-11 19:15	06-15-11 19:15
Container:	<b>120 mL Amber Glass</b>	Cleaned Up:	06-22-11 03:00	06-22-11 03:00	06-22-11 03:00
Preservation:	<b>Cool</b>	Analyzed:	06-25-11 18:00	06-25-11 18:00	06-25-11 18:00
		Analyst:	06-27-11 13:07	06-27-11 13:30	06-27-11 13:54
		QC Batch ID:	CRL	CRL	CRL
		Instrument ID:	PB-3761-X	PB-3761-X	PB-3761-X
		Sample Weight:	GC-11 Agilent 6890	GC-11 Agilent 6890	GC-11 Agilent 6890
		Final Volume:	30g	30g	30g
		Percent Solids:	1 mL	1 mL	1 mL
		Dilution Factor:	86	86	86
			1	1	1

CAS Number	Analyte	Unspiked Sample (ug/Kg)	MS Spiked (ug/Kg)	MS Measured		MS Recovery		MSD Spiked (ug/Kg)	MSD Measured		MSD Recovery		RPD		QC Limits	
				1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col		1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	BRL	190	200	190	105 %	101 %	190	200	190	110 %	100 %	2 %	3 %	40 - 140%	50 %
11096-82-5	Aroclor 1260	47	190	210	250	96 %	107 %	190	220	240	99 %	106 %	1 %	3 %	40 - 140%	50 %

QC Surrogate Compound	Surrogate Recovery													QC Limits	
Tetrachloro- <i>m</i> -xylene	84%	8	6	6	78%	79%	7	6	6	82%	82%			30 - 150 %	
Decachlorobiphenyl	94%	8	7	7	92%	94%	7	7	7	98%	97%			30 - 150 %	

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3546. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124593**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-17**  
 Sampled: **06-13-11 08:30**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-21-11 15:31**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **91**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	BRL		ug/Kg	43
11097-69-1	Aroclor 1254	260	2C (250)*	ug/Kg	43
11096-82-5	Aroclor 1260	180	2C (100)*	ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	89 %	30 - 150 %
	Decachlorobiphenyl	7	8	113 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	89 %	30 - 150 %
	Decachlorobiphenyl	7	9	119 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124594**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-18**  
 Sampled: **06-13-11 08:30**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-21-11 15:55**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **85**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	46
11104-28-2	Aroclor 1221	BRL		ug/Kg	46
11141-16-5	Aroclor 1232	BRL		ug/Kg	46
53469-21-9	Aroclor 1242	BRL		ug/Kg	46
12672-29-6	Aroclor 1248	BRL		ug/Kg	46
11097-69-1	Aroclor 1254	85	1C (77)*	ug/Kg	46
11096-82-5	Aroclor 1260	63	2C (46)*	ug/Kg	46
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	46
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	46

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	72 %	30 - 150 %
	Decachlorobiphenyl	8	6	81 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	5	70 %	30 - 150 %
	Decachlorobiphenyl	8	6	82 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124595**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-19**  
Sampled: **06-13-11 08:45**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 14:15**  
Cleaned Up: **06-20-11 21:00**  
Analyzed: **06-21-11 16:18**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3757-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **93**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	BRL		ug/Kg	42
11097-69-1	Aroclor 1254	<b>610</b>	e 2C (580)*	ug/Kg	42
11096-82-5	Aroclor 1260	<b>380</b>	e 2C (210)*	ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	7	4	54 %	30 - 150 %
Column	Decachlorobiphenyl	7	5	68 %	30 - 150 %
Second	Tetrachloro- <i>m</i> -xylene	7	4	55 %	30 - 150 %
Column	Decachlorobiphenyl	7	5	70 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.  
e Concentration exceeded calibration range for the analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124595**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-19RA1**  
 Sampled: **06-13-11 08:45**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-21-11 21:49**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **93**  
 Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	210
11104-28-2	Aroclor 1221	BRL		ug/Kg	210
11141-16-5	Aroclor 1232	BRL		ug/Kg	210
53469-21-9	Aroclor 1242	BRL		ug/Kg	210
12672-29-6	Aroclor 1248	BRL		ug/Kg	210
11097-69-1	Aroclor 1254	<b>640</b>	2C (640)*	ug/Kg	210
11096-82-5	Aroclor 1260	<b>440</b>	2C (240)*	ug/Kg	210
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	210
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	210

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	4	<b>53</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>73</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	4	<b>57</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>89</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124596**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-20**  
Sampled: **06-13-11 08:45**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 14:15**  
Cleaned Up: **06-20-11 21:00**  
Analyzed: **06-21-11 16:42**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3757-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **94**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	BRL		ug/Kg	42
11097-69-1	Aroclor 1254	<b>160</b>	1C (140)*	ug/Kg	42
11096-82-5	Aroclor 1260	<b>97</b>	2C (48)*	ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>75</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>84</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>77</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>92</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124597**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-21**  
 Sampled: **06-13-11 08:50**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-21-11 17:05**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **93**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	<b>420</b>	e 1C (340)*	ug/Kg	43
11097-69-1	Aroclor 1254	<b>150</b>	2C (120)*	ug/Kg	43
11096-82-5	Aroclor 1260	BRL		ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>87</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>73</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>90</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>78</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

2C Concentration reported from second column.

e Indicates concentration exceeded calibration range for analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124597**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-21RA1**  
 Sampled: **06-13-11 08:50**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-22-11 23:59**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **93**  
 Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	210
11104-28-2	Aroclor 1221	BRL		ug/Kg	210
11141-16-5	Aroclor 1232	BRL		ug/Kg	210
53469-21-9	Aroclor 1242	BRL		ug/Kg	210
12672-29-6	Aroclor 1248	510	1C (380)*	ug/Kg	210
11097-69-1	Aroclor 1254	BRL		ug/Kg	210
11096-82-5	Aroclor 1260	BRL		ug/Kg	210
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	210
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	210

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	93 %	30 - 150 %
	Decachlorobiphenyl	7	6	89 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	98 %	30 - 150 %
	Decachlorobiphenyl	7	6	88 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124598**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-22**  
 Sampled: **06-13-11 08:55**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-21-11 17:29**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **89**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	44
11104-28-2	Aroclor 1221	BRL		ug/Kg	44
11141-16-5	Aroclor 1232	BRL		ug/Kg	44
53469-21-9	Aroclor 1242	BRL		ug/Kg	44
12672-29-6	Aroclor 1248	BRL		ug/Kg	44
11097-69-1	Aroclor 1254	73	1C (45)*	ug/Kg	44
11096-82-5	Aroclor 1260	BRL		ug/Kg	44
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	44
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	44

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	81 %	30 - 150 %
	Decachlorobiphenyl	7	5	70 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	83 %	30 - 150 %
	Decachlorobiphenyl	7	5	70 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124599**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-23**  
Sampled: **06-13-11 08:57**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 14:15**  
Cleaned Up: **06-20-11 21:00**  
Analyzed: **06-21-11 17:53**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3757-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **92**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	BRL		ug/Kg	43
11097-69-1	Aroclor 1254	<b>160</b>	1C (130)*	ug/Kg	43
11096-82-5	Aroclor 1260	<b>79</b>	2C (47)*	ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	7	6	<b>80</b> %	30 - 150 %
Column	Decachlorobiphenyl	7	6	<b>89</b> %	30 - 150 %
Second	Tetrachloro- <i>m</i> -xylene	7	6	<b>79</b> %	30 - 150 %
Column	Decachlorobiphenyl	7	7	<b>95</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.  
2C Concentration reported from second column.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124600**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-24**  
Sampled: **06-13-11 08:59**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 14:15**  
Cleaned Up: **06-20-11 21:00**  
Analyzed: **06-21-11 18:16**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3757-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **91**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	BRL		ug/Kg	43
11097-69-1	Aroclor 1254	<b>100</b>	1C (92)*	ug/Kg	43
11096-82-5	Aroclor 1260	<b>76</b>	2C (45)*	ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>91</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>91</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>88</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>99</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124601**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-25**  
Sampled: **06-13-11 09:06**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 14:15**  
Cleaned Up: **06-20-11 21:00**  
Analyzed: **06-21-11 18:40**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3757-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **89**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	BRL		ug/Kg	45
11097-69-1	Aroclor 1254	350	2C (340)*	ug/Kg	45
11096-82-5	Aroclor 1260	300	2C (250)*	ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	90 %	30 - 150 %
	Decachlorobiphenyl	7	8	102 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	86 %	30 - 150 %
	Decachlorobiphenyl	7	8	103 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124602**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-26**  
Sampled: **06-13-11 09:08**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 14:15**  
Cleaned Up: **06-20-11 21:00**  
Analyzed: **06-21-11 19:04**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3757-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **90**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	BRL		ug/Kg	45
11097-69-1	Aroclor 1254	<b>470</b>	1C (430)*	ug/Kg	45
11096-82-5	Aroclor 1260	<b>320</b>	2C (240)*	ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>88</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>91</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>86</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>97</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124603**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-27**  
Sampled: **06-13-11 09:22**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 14:15**  
Cleaned Up: **06-20-11 21:00**  
Analyzed: **06-21-11 20:38**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3757-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **94**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	BRL		ug/Kg	42
11097-69-1	Aroclor 1254	<b>310</b>	2C (300)*	ug/Kg	42
11096-82-5	Aroclor 1260	<b>180</b>	2C (120)*	ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>76</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>90</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>74</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>87</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124604**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-28**  
 Sampled: **06-13-11 09:24**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 14:15**  
 Cleaned Up: **06-20-11 21:00**  
 Analyzed: **06-21-11 21:02**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3757-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **88**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	44
11104-28-2	Aroclor 1221	BRL		ug/Kg	44
11141-16-5	Aroclor 1232	BRL		ug/Kg	44
53469-21-9	Aroclor 1242	BRL		ug/Kg	44
12672-29-6	Aroclor 1248	BRL		ug/Kg	44
11097-69-1	Aroclor 1254	250	2C (250)*	ug/Kg	44
11096-82-5	Aroclor 1260	170	2C (100)*	ug/Kg	44
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	44
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	44

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	73 %	30 - 150 %
	Decachlorobiphenyl	7	6	78 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	73 %	30 - 150 %
	Decachlorobiphenyl	7	6	87 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124605**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-29**  
Sampled: **06-13-11 09:49**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 14:15**  
Cleaned Up: **06-20-11 21:00**  
Analyzed: **06-21-11 21:25**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3757-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **80**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	49
11104-28-2	Aroclor 1221	BRL		ug/Kg	49
11141-16-5	Aroclor 1232	BRL		ug/Kg	49
53469-21-9	Aroclor 1242	BRL		ug/Kg	49
12672-29-6	Aroclor 1248	BRL		ug/Kg	49
11097-69-1	Aroclor 1254	2,500	e 1C (2500)*	ug/Kg	49
11096-82-5	Aroclor 1260	1,800	e 2C (1200)*	ug/Kg	49
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	49
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	49

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	8	5	56 %	30 - 150 %
Column	Decachlorobiphenyl	8	5	57 %	30 - 150 %
Second	Tetrachloro- <i>m</i> -xylene	8	5	56 %	30 - 150 %
Column	Decachlorobiphenyl	8	6	72 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.  
2C Concentration reported from second column.  
e Indicates concentration exceeded calibration range for analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124605**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-29RA1**  
Sampled: **06-13-11 09:49**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 14:15**  
Cleaned Up: **06-20-11 21:00**  
Analyzed: **06-23-11 00:23**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3757-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **80**  
Dilution Factor: **10**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	490
11104-28-2	Aroclor 1221	BRL		ug/Kg	490
11141-16-5	Aroclor 1232	BRL		ug/Kg	490
53469-21-9	Aroclor 1242	BRL		ug/Kg	490
12672-29-6	Aroclor 1248	BRL		ug/Kg	490
11097-69-1	Aroclor 1254	3,200	2C (2600)*	ug/Kg	490
11096-82-5	Aroclor 1260	1,500	2C (1200)*	ug/Kg	490
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	490
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	490

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	5	61 %	30 - 150 %
	Decachlorobiphenyl	8	6	78 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	5	59 %	30 - 150 %
	Decachlorobiphenyl	8	6	76 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124606**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-30**  
 Sampled: **06-13-11 09:58**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-22-11 04:10**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **86**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	47
11104-28-2	Aroclor 1221	BRL		ug/Kg	47
11141-16-5	Aroclor 1232	BRL		ug/Kg	47
53469-21-9	Aroclor 1242	BRL		ug/Kg	47
12672-29-6	Aroclor 1248	BRL		ug/Kg	47
11097-69-1	Aroclor 1254	610	e 2C (530)*	ug/Kg	47
11096-82-5	Aroclor 1260	270	2C (220)*	ug/Kg	47
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	47
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	47

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	5	70 %	30 - 150 %
	Decachlorobiphenyl	8	5	69 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	5	69 %	30 - 150 %
	Decachlorobiphenyl	8	7	85 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.  
 e Indicates concentration exceeds calibration range for analyte.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124606**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-30RA1**  
 Sampled: **06-13-11 09:58**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-23-11 00:46**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **86**  
 Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	230
11104-28-2	Aroclor 1221	BRL		ug/Kg	230
11141-16-5	Aroclor 1232	BRL		ug/Kg	230
53469-21-9	Aroclor 1242	BRL		ug/Kg	230
12672-29-6	Aroclor 1248	BRL		ug/Kg	230
11097-69-1	Aroclor 1254	<b>670</b>	2C (530)*	ug/Kg	230
11096-82-5	Aroclor 1260	BRL		ug/Kg	230
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	230
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	230

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>75</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>63</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>79</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>65</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124607**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-31**  
Sampled: **06-13-11 10:00**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 17:30**  
Cleaned Up: **06-21-11 23:00**  
Analyzed: **06-22-11 04:34**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3758-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **86**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	46
11104-28-2	Aroclor 1221	BRL		ug/Kg	46
11141-16-5	Aroclor 1232	BRL		ug/Kg	46
53469-21-9	Aroclor 1242	BRL		ug/Kg	46
12672-29-6	Aroclor 1248	<b>380</b>	1C (220)*	ug/Kg	46
11097-69-1	Aroclor 1254	<b>350</b>	1C (310)*	ug/Kg	46
11096-82-5	Aroclor 1260	BRL		ug/Kg	46
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	46
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	46

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>72</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>63</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>74</b> %	30 - 150 %
	Decachlorobiphenyl	8	6	<b>82</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124608**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-32**  
 Sampled: **06-13-11 10:03**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-22-11 04:57**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **94**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	390	1C (310)*	ug/Kg	43
11097-69-1	Aroclor 1254	460	e 1C (390)*	ug/Kg	43
11096-82-5	Aroclor 1260	BRL		ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	79 %	30 - 150 %
	Decachlorobiphenyl	7	5	76 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	83 %	30 - 150 %
	Decachlorobiphenyl	7	7	93 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.  
 e Indicates concentration exceeds calibration range for analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124608**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-32RA1**  
Sampled: **06-13-11 10:03**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 17:30**  
Cleaned Up: **06-21-11 23:00**  
Analyzed: **06-23-11 01:34**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3758-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **94**  
Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	210
11104-28-2	Aroclor 1221	BRL		ug/Kg	210
11141-16-5	Aroclor 1232	BRL		ug/Kg	210
53469-21-9	Aroclor 1242	BRL		ug/Kg	210
12672-29-6	Aroclor 1248	<b>630</b>	1C (330)*	ug/Kg	210
11097-69-1	Aroclor 1254	<b>440</b>	2C (420)*	ug/Kg	210
11096-82-5	Aroclor 1260	BRL		ug/Kg	210
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	210
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	210

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>83</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>85</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>87</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>89</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124609**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-33**  
Sampled: **06-13-11 10:06**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 17:30**  
Cleaned Up: **06-21-11 23:00**  
Analyzed: **06-22-11 05:21**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3758-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **94**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	<b>180</b>	1C (130)*	ug/Kg	42
11097-69-1	Aroclor 1254	<b>240</b>	1C (200)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	4	<b>63</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>69</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>64</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>84</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124610**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-34**  
Sampled: **06-13-11 10:08**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 17:30**  
Cleaned Up: **06-21-11 23:00**  
Analyzed: **06-22-11 06:55**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3758-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **93**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	<b>660</b>	e 1C (480)*	ug/Kg	42
11097-69-1	Aroclor 1254	<b>510</b>	e 2C (500)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>74</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>73</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>74</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>78</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.  
2C Concentration reported from second column.  
e Indicates concentration exceeds calibration range for analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124610**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-34RA1**  
Sampled: **06-13-11 10:08**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 17:30**  
Cleaned Up: **06-21-11 23:00**  
Analyzed: **06-23-11 01:57**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3758-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **93**  
Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	210
11104-28-2	Aroclor 1221	BRL		ug/Kg	210
11141-16-5	Aroclor 1232	BRL		ug/Kg	210
53469-21-9	Aroclor 1242	BRL		ug/Kg	210
12672-29-6	Aroclor 1248	700	1C (530)*	ug/Kg	210
11097-69-1	Aroclor 1254	590	2C (520)*	ug/Kg	210
11096-82-5	Aroclor 1260	BRL		ug/Kg	210
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	210
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	210

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	75 %	30 - 150 %
	Decachlorobiphenyl	7	6	78 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	77 %	30 - 150 %
	Decachlorobiphenyl	7	6	83 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124611**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-35**  
Sampled: **06-13-11 10:23**  
Received: **06-15-11 19:15**  
Extracted: **06-23-11 20:30**  
Cleaned Up: **06-25-11 20:00**  
Analyzed: **06-28-11 00:51**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3762-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **94**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	<b>900</b>	e 2C (730)*	ug/Kg	42
11097-69-1	Aroclor 1254	<b>470</b>	e 1C (380)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>100</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>105</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>105</b> %	30 - 150 %
	Decachlorobiphenyl	7	8	<b>108</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

2C Concentration reported from second column.

e Indicates concentration exceeds calibration range for analyte.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124611**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-35RA1**  
 Sampled: **06-13-11 10:23**  
 Received: **06-15-11 19:15**  
 Extracted: **06-23-11 20:30**  
 Cleaned Up: **06-25-11 20:00**  
 Analyzed: **06-28-11 11:15**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3762-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **94**  
 Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	210
11104-28-2	Aroclor 1221	BRL		ug/Kg	210
11141-16-5	Aroclor 1232	BRL		ug/Kg	210
53469-21-9	Aroclor 1242	BRL		ug/Kg	210
12672-29-6	Aroclor 1248	<b>930</b>	2C (730)*	ug/Kg	210
11097-69-1	Aroclor 1254	<b>380</b>	2C (360)*	ug/Kg	210
11096-82-5	Aroclor 1260	BRL		ug/Kg	210
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	210
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	210

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>95</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>100</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>104</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>106</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124612**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-36**  
Sampled: **06-13-11 10:23**  
Received: **06-15-11 19:15**  
Extracted: **06-23-11 20:30**  
Cleaned Up: **06-25-11 20:00**  
Analyzed: **06-28-11 01:15**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3762-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **94**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	<b>900</b>	e 2C (740)*	ug/Kg	41
11097-69-1	Aroclor 1254	<b>640</b>	e 1C (390)*	ug/Kg	41
11096-82-5	Aroclor 1260	BRL		ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>108</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>107</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	8	<b>114</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>107</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

2C Concentration reported from second column.

e Indicates concentration exceeds calibration range for analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124612**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-36RA1**  
Sampled: **06-13-11 10:23**  
Received: **06-15-11 19:15**  
Extracted: **06-23-11 20:30**  
Cleaned Up: **06-25-11 20:00**  
Analyzed: **06-28-11 11:39**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3762-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **94**  
Dilution Factor: **2**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	83
11104-28-2	Aroclor 1221	BRL		ug/Kg	83
11141-16-5	Aroclor 1232	BRL		ug/Kg	83
53469-21-9	Aroclor 1242	BRL		ug/Kg	83
12672-29-6	Aroclor 1248	<b>800</b>	2C (750)*	ug/Kg	83
11097-69-1	Aroclor 1254	<b>610</b>	1C (390)*	ug/Kg	83
11096-82-5	Aroclor 1260	BRL		ug/Kg	83
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	83
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	83

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>107</b> %	30 - 150 %
	Decachlorobiphenyl	7	8	<b>109</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	8	<b>114</b> %	30 - 150 %
	Decachlorobiphenyl	7	8	<b>111</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.  
2C Concentration reported from second column.

## Matrix Spike and Matrix Spike Duplicate EPA Method 8082

Field ID:	<b>124611</b>	Laboratory ID:	<b>Parent Sample</b>	<b>Matrix Spike</b>	<b>Spike Duplicate</b>
Project:	<b>EH&amp;E/17228</b>	Sampled:	142678-35	142678-37	142678-38
Client:	<b>Environmental Health &amp; Engineering, Inc.</b>	Received:	06-13-11 10:23	06-13-11 10:23	06-13-11 10:23
Matrix:	<b>Soil</b>	Extracted:	06-15-11 19:15	06-15-11 19:15	06-15-11 19:15
Container:	<b>120 mL Amber Glass</b>	Cleaned Up:	06-23-11 20:30	06-23-11 20:30	06-23-11 20:30
Preservation:	<b>Cool</b>	Analyzed:	06-25-11 20:00	06-25-11 20:00	06-25-11 20:00
		Analyst:	06-28-11 11:15	06-28-11 12:03	06-28-11 12:27
		QC Batch ID:	CRL	CRL	CRL
		Instrument ID:	PB-3762-X	PB-3762-X	PB-3762-X
		Sample Weight:	GC-11 Agilent 6890	GC-11 Agilent 6890	GC-11 Agilent 6890
		Final Volume:	30g	30g	30g
		Percent Solids:	1 mL	1 mL	1 mL
		Dilution Factor:	94	94	94
			5	5	5

CAS Number	Analyte	Unspiked Sample (ug/Kg)	MS Spiked (ug/Kg)	MS Measured		MS Recovery		MSD Spiked (ug/Kg)	MSD Measured		MSD Recovery		RPD		QC Limits	
				1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col		1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	BRL	170	550	570	318 % m	329 % m	180	500	520	286 % m	294 % m	10 %	10 %	40 - 140%	50 %
11096-82-5	Aroclor 1260	BRL	170	310	410	177 % m	233 % m	180	280	380	159 % m	216 % m	10 %	7 %	40 - 140%	50 %

QC Surrogate Compound	Surrogate Recovery												QC Limits	
Tetrachloro- <i>m</i> -xylene	95%	7	7	8	106%	113%	7	7	7	100%	104%		30 - 150 %	
Decachlorobiphenyl	100%	7	7	8	104%	114%	7	7	7	95%	101%		30 - 150 %	

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3546. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
m Recovery outside recommended limits due to sample matrix interference.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124614**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-39**  
Sampled: **06-13-11 10:24**  
Received: **06-15-11 19:15**  
Extracted: **06-23-11 20:30**  
Cleaned Up: **06-25-11 20:00**  
Analyzed: **06-28-11 03:38**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3762-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **95**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	<b>1,300</b>	e 2C (850)*	ug/Kg	42
11097-69-1	Aroclor 1254	<b>640</b>	e 1C (460)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>103</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>105</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	8	<b>110</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>107</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

2C Concentration reported from second column.

e Indicates concentration exceeds calibration range for analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124614**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-39RA1**  
Sampled: **06-13-11 10:24**  
Received: **06-15-11 19:15**  
Extracted: **06-23-11 20:30**  
Cleaned Up: **06-25-11 20:00**  
Analyzed: **06-28-11 12:51**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3762-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **95**  
Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	210
11104-28-2	Aroclor 1221	BRL		ug/Kg	210
11141-16-5	Aroclor 1232	BRL		ug/Kg	210
53469-21-9	Aroclor 1242	BRL		ug/Kg	210
12672-29-6	Aroclor 1248	<b>1,200</b>	2C (770)*	ug/Kg	210
11097-69-1	Aroclor 1254	<b>620</b>	1C (460)*	ug/Kg	210
11096-82-5	Aroclor 1260	BRL		ug/Kg	210
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	210
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	210

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>102</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>101</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	8	<b>109</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>107</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124615**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-40**  
 Sampled: **06-13-11 10:24**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-22-11 07:42**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **96**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	670	e 2C (430)*	ug/Kg	41
11097-69-1	Aroclor 1254	460	2C (430)*	ug/Kg	41
11096-82-5	Aroclor 1260	BRL		ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	87 %	30 - 150 %
	Decachlorobiphenyl	7	5	76 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	91 %	30 - 150 %
	Decachlorobiphenyl	7	6	81 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.  
 e Indicates concentration exceeds calibration range for analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124615**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-40RA1**  
 Sampled: **06-13-11 10:24**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-23-11 02:21**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **96**  
 Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	210
11104-28-2	Aroclor 1221	BRL		ug/Kg	210
11141-16-5	Aroclor 1232	BRL		ug/Kg	210
53469-21-9	Aroclor 1242	BRL		ug/Kg	210
12672-29-6	Aroclor 1248	<b>620</b>	2C (580)*	ug/Kg	210
11097-69-1	Aroclor 1254	<b>520</b>	2C (460)*	ug/Kg	210
11096-82-5	Aroclor 1260	BRL		ug/Kg	210
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	210
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	210

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>90</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>85</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>96</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>96</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.



## Matrix Spike and Matrix Spike Duplicate EPA Method 8082

Field ID:	<b>124614</b>	Laboratory ID:	<b>Parent Sample</b>	<b>Matrix Spike</b>	<b>Spike Duplicate</b>
Project:	<b>EH&amp;E/17228</b>	Sampled:	142678-39	142678-41	142678-42
Client:	<b>Environmental Health &amp; Engineering, Inc.</b>	Received:	06-13-11 10:24	06-13-11 10:24	06-13-11 10:24
Matrix:	<b>Soil</b>	Extracted:	06-15-11 19:15	06-15-11 19:15	06-15-11 19:15
Container:	<b>120 mL Amber Glass</b>	Cleaned Up:	06-23-11 20:30	06-23-11 20:30	06-23-11 20:30
Preservation:	<b>Cool</b>	Analyzed:	06-25-11 20:00	06-25-11 20:00	06-25-11 20:00
		Analyst:	06-28-11 12:51	06-28-11 14:02	06-28-11 14:26
		QC Batch ID:	CRL	CRL	CRL
		Instrument ID:	PB-3762-X	PB-3762-X	PB-3762-X
		Sample Weight:	GC-11 Agilent 6890	GC-11 Agilent 6890	GC-11 Agilent 6890
		Final Volume:	30g	30g	30g
		Percent Solids:	1 mL	1 mL	1 mL
		Dilution Factor:	95	95	95
			5	5	5

CAS Number	Analyte	Unspiked Sample (ug/Kg)	MS Spiked (ug/Kg)	MS Measured		MS Recovery		MSD Spiked (ug/Kg)	MSD Measured		MSD Recovery		RPD		QC Limits	
				1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col		1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	BRL	170	540	520	310 % m	300 % m	170	520	500	301 % m	288 % m	3 %	4 %	40 - 140%	50 %
11096-82-5	Aroclor 1260	BRL	170	300	410	176 % m	240 % m	170	300	420	173 % m	242 % m	2 %	1 %	40 - 140%	50 %

QC Surrogate Compound	Surrogate Recovery												QC Limits	
Tetrachloro- <i>m</i> -xylene	102%	7	7	7	103%	104%	7	7	7	100%	104%		30 - 150 %	
Decachlorobiphenyl	101%	7	7	7	98%	102%	7	7	7	98%	101%		30 - 150 %	

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3546. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
m Recovery outside recommended limits due to sample matrix interference.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124617**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-43**  
Sampled: **06-13-11 10:28**  
Received: **06-15-11 19:15**  
Extracted: **06-23-11 20:30**  
Cleaned Up: **06-25-11 20:00**  
Analyzed: **06-28-11 04:49**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3762-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **97**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	<b>430</b>	1C (420)*	ug/Kg	41
11097-69-1	Aroclor 1254	<b>110</b>	1C (98)*	ug/Kg	41
11096-82-5	Aroclor 1260	BRL		ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>96</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>101</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>103</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>105</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124618**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-44**  
 Sampled: **06-13-11 10:45**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-22-11 08:06**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **94**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	BRL		ug/Kg	42
11097-69-1	Aroclor 1254	<b>420</b>	1C (370)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>85</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>69</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>90</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>79</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

**Matrix Spike and Matrix Spike Duplicate  
EPA Method 8082**

Field ID:	<b>124617</b>	Laboratory ID:	<b>Parent Sample</b>	<b>Matrix Spike</b>	<b>Spike Duplicate</b>
Project:	<b>EH&amp;E/17228</b>	Sampled:	142678-43	142678-45	142678-46
Client:	<b>Environmental Health &amp; Engineering, Inc.</b>	Received:	06-13-11 10:28	06-13-11 10:28	06-13-11 10:28
Matrix:	<b>Soil</b>	Extracted:	06-15-11 19:15	06-15-11 19:15	06-15-11 19:15
Container:	<b>120 mL Amber Glass</b>	Cleaned Up:	06-23-11 20:30	06-23-11 20:30	06-23-11 20:30
Preservation:	<b>Cool</b>	Analyzed:	06-25-11 20:00	06-25-11 20:00	06-25-11 20:00
		Analyst:	06-28-11 04:49	06-28-11 14:50	06-28-11 15:14
		QC Batch ID:	CRL	CRL	CRL
		Instrument ID:	PB-3762-X	PB-3762-X	PB-3762-X
		Sample Weight:	GC-11 Agilent 6890	GC-11 Agilent 6890	GC-11 Agilent 6890
		Final Volume:	31g	31g	31g
		Percent Solids:	1 mL	1 mL	1 mL
		Dilution Factor:	97	97	95
			1	1	1

CAS Number	Analyte	Unspiked Sample (ug/Kg)	MS Spiked (ug/Kg)	MS Measured		MS Recovery		MSD Spiked (ug/Kg)	MSD Measured		MSD Recovery		RPD		QC Limits	
				1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col		1st Col (ug/Kg)	2nd Col (ug/Kg)	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	BRL	170	650	770	381 % m	447 % m	170	590	660	348 % m	389 % m	10 %	14 %	40 - 140%	50 %
11096-82-5	Aroclor 1260	BRL	170	370	420	217 % m	245 % m	170	340	360	200 % m	212 % m	9 %	15 %	40 - 140%	50 %

QC Surrogate Compound	Surrogate Recovery												QC Limits	
Tetrachloro- <i>m</i> -xylene	96%	7	9	9	129%	130%	7	7	7	107%	108%		30 - 150 %	
Decachlorobiphenyl	101%	7	8	8	120%	124%	7	7	8	106%	111%		30 - 150 %	

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3546. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
m Recovery outside recommended limits due to sample matrix interference.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124620**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-47**  
 Sampled: **06-13-11 10:45**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-22-11 08:30**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **94**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	BRL		ug/Kg	42
11097-69-1	Aroclor 1254	<b>450</b>	1C (330)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>79</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>64</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>81</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>66</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124621**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-48**  
 Sampled: **06-13-11 10:48**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-22-11 08:53**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **95**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	330	1C (310)*	ug/Kg	41
11096-82-5	Aroclor 1260	BRL		ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	78 %	30 - 150 %
	Decachlorobiphenyl	7	4	64 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	83 %	30 - 150 %
	Decachlorobiphenyl	7	5	69 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124624**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-49**  
Sampled: **06-13-11 10:57**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 17:30**  
Cleaned Up: **06-21-11 23:00**  
Analyzed: **06-22-11 09:17**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3758-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **92**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	<b>120</b>	1C (110)*	ug/Kg	43
11097-69-1	Aroclor 1254	<b>210</b>	1C (210)*	ug/Kg	43
11096-82-5	Aroclor 1260	BRL		ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>87</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>69</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>94</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>82</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124627**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-50**  
 Sampled: **06-13-11 11:00**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-22-11 09:40**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **92**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	BRL		ug/Kg	43
11097-69-1	Aroclor 1254	<b>290</b>	1C (250)*	ug/Kg	43
11096-82-5	Aroclor 1260	<b>170</b>	2C (95)*	ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>74</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>86</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>76</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>103</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.  
 2C Concentration reported from second column.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124628**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-51**  
 Sampled: **06-13-11 11:26**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-22-11 10:04**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **87**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	BRL		ug/Kg	45
11097-69-1	Aroclor 1254	<b>160</b>	2C (110)*	ug/Kg	45
11096-82-5	Aroclor 1260	<b>99</b>	2C (58)*	ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>80</b> %	30 - 150 %
	Decachlorobiphenyl	8	7	<b>91</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>80</b> %	30 - 150 %
	Decachlorobiphenyl	8	8	<b>111</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124631**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-52**  
Sampled: **06-13-11 11:30**  
Received: **06-15-11 19:15**  
Extracted: **06-16-11 17:30**  
Cleaned Up: **06-21-11 23:00**  
Analyzed: **06-22-11 10:28**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3758-X**  
Instrument ID: **GC-11 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **87**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	BRL		ug/Kg	45
11097-69-1	Aroclor 1254	<b>120</b>	2C (110)*	ug/Kg	45
11096-82-5	Aroclor 1260	<b>79</b>	2C (46)*	ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>82</b> %	30 - 150 %
	Decachlorobiphenyl	8	7	<b>91</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>81</b> %	30 - 150 %
	Decachlorobiphenyl	8	8	<b>112</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124634**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-53**  
 Sampled: **06-13-11 11:34**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-22-11 12:02**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **92**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	BRL		ug/Kg	43
11097-69-1	Aroclor 1254	<b>140</b>	2C (110)*	ug/Kg	43
11096-82-5	Aroclor 1260	BRL		ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	3	<b>41</b> %	30 - 150 %
	Decachlorobiphenyl	7	3	<b>34</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	3	<b>42</b> %	30 - 150 %
	Decachlorobiphenyl	7	3	<b>41</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124637**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-54**  
 Sampled: **06-13-11 11:37**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-22-11 12:26**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **84**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	47
11104-28-2	Aroclor 1221	BRL		ug/Kg	47
11141-16-5	Aroclor 1232	BRL		ug/Kg	47
53469-21-9	Aroclor 1242	BRL		ug/Kg	47
12672-29-6	Aroclor 1248	BRL		ug/Kg	47
11097-69-1	Aroclor 1254	510	2C (450)*	ug/Kg	47
11096-82-5	Aroclor 1260	360	2C (240)*	ug/Kg	47
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	47
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	47

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	5	70 %	30 - 150 %
	Decachlorobiphenyl	8	6	78 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	5	70 %	30 - 150 %
	Decachlorobiphenyl	8	8	101 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124640**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-55**  
 Sampled: **06-13-11 11:43**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-22-11 12:49**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **95**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	<b>1,300</b>	e 2C (940)*	ug/Kg	41
11096-82-5	Aroclor 1260	BRL		ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>65</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>52</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>67</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>64</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.  
 e Indicates concentration exceeds calibration range for analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124640**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-55RA1**  
 Sampled: **06-13-11 11:43**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 17:30**  
 Cleaned Up: **06-21-11 23:00**  
 Analyzed: **06-23-11 02:44**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3758-X**  
 Instrument ID: **GC-11 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **95**  
 Dilution Factor: **10**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	410
11104-28-2	Aroclor 1221	BRL		ug/Kg	410
11141-16-5	Aroclor 1232	BRL		ug/Kg	410
53469-21-9	Aroclor 1242	BRL		ug/Kg	410
12672-29-6	Aroclor 1248	BRL		ug/Kg	410
11097-69-1	Aroclor 1254	<b>1,500</b>	2C (1300)*	ug/Kg	410
11096-82-5	Aroclor 1260	BRL		ug/Kg	410
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	410
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	410

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>68</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>62</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>74</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>70</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124643**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-56**  
 Sampled: **06-14-11 10:10**  
 Received: **06-15-11 19:15**  
 Extracted: **06-21-11 13:30**  
 Cleaned Up: **06-24-11 15:00**  
 Analyzed: **06-24-11 20:09**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3760-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **94**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	BRL		ug/Kg	43
11097-69-1	Aroclor 1254	<b>110</b>	2C (66)*	ug/Kg	43
11096-82-5	Aroclor 1260	BRL		ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	7	3	<b>40</b> %
Column	Decachlorobiphenyl	7	3	<b>47</b> %
Second	Tetrachloro- <i>m</i> -xylene	7	3	<b>44</b> %
Column	Decachlorobiphenyl	7	3	<b>48</b> %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124644**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-57**  
 Sampled: **06-14-11 10:20**  
 Received: **06-15-11 19:15**  
 Extracted: **06-21-11 13:30**  
 Cleaned Up: **06-24-11 15:00**  
 Analyzed: **06-24-11 20:33**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3760-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **93**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	BRL		ug/Kg	43
11097-69-1	Aroclor 1254	<b>64</b>	2C (47)*	ug/Kg	43
11096-82-5	Aroclor 1260	BRL		ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>64</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>79</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>66</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>80</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124645**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-58**  
Sampled: **06-14-11 10:35**  
Received: **06-15-11 19:15**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-24-11 20:56**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3760-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **92**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	BRL		ug/Kg	43
11097-69-1	Aroclor 1254	<b>340</b>	2C (220)*	ug/Kg	43
11096-82-5	Aroclor 1260	BRL		ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>80</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>88</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>84</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>91</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

## EPA Method 8082 Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID: **124646**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-59**  
Sampled: **06-14-11 10:45**  
Received: **06-15-11 19:15**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-24-11 21:20**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3760-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **90**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	44
11104-28-2	Aroclor 1221	BRL		ug/Kg	44
11141-16-5	Aroclor 1232	BRL		ug/Kg	44
53469-21-9	Aroclor 1242	BRL		ug/Kg	44
12672-29-6	Aroclor 1248	BRL		ug/Kg	44
11097-69-1	Aroclor 1254	<b>100</b>	2C (72)*	ug/Kg	44
11096-82-5	Aroclor 1260	BRL		ug/Kg	44
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	44
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	44

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>67</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>84</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>69</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>93</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124647**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-60**  
Sampled: **06-14-11 10:50**  
Received: **06-15-11 19:15**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-24-11 22:55**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3760-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **84**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	47
11104-28-2	Aroclor 1221	BRL		ug/Kg	47
11141-16-5	Aroclor 1232	BRL		ug/Kg	47
53469-21-9	Aroclor 1242	BRL		ug/Kg	47
12672-29-6	Aroclor 1248	BRL		ug/Kg	47
11097-69-1	Aroclor 1254	<b>1,300</b>	e 2C (860)*	ug/Kg	47
11096-82-5	Aroclor 1260	BRL		ug/Kg	47
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	47
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	47

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	4	<b>55</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>68</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	5	<b>58</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>68</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.  
e Indicates concentration exceeds calibration range for analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124647**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-60RA1**  
Sampled: **06-14-11 10:50**  
Received: **06-15-11 19:15**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-28-11 08:23**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3760-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **84**  
Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	240
11104-28-2	Aroclor 1221	BRL		ug/Kg	240
11141-16-5	Aroclor 1232	BRL		ug/Kg	240
53469-21-9	Aroclor 1242	BRL		ug/Kg	240
12672-29-6	Aroclor 1248	BRL		ug/Kg	240
11097-69-1	Aroclor 1254	<b>1,300</b>	2C (1100)*	ug/Kg	240
11096-82-5	Aroclor 1260	BRL		ug/Kg	240
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	240
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	240

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	5	<b>61</b> %	30 - 150 %
	Decachlorobiphenyl	8	6	<b>70</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	5	<b>66</b> %	30 - 150 %
	Decachlorobiphenyl	8	6	<b>70</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124648**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-61**  
Sampled: **06-14-11 11:05**  
Received: **06-15-11 19:15**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-24-11 23:19**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3760-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **87**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	46
11104-28-2	Aroclor 1221	BRL		ug/Kg	46
11141-16-5	Aroclor 1232	BRL		ug/Kg	46
53469-21-9	Aroclor 1242	BRL		ug/Kg	46
12672-29-6	Aroclor 1248	BRL		ug/Kg	46
11097-69-1	Aroclor 1254	340	2C (230)*	ug/Kg	46
11096-82-5	Aroclor 1260	BRL		ug/Kg	46
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	46
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	46

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	5	61 %	30 - 150 %
	Decachlorobiphenyl	8	6	73 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	5	64 %	30 - 150 %
	Decachlorobiphenyl	8	6	77 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124649**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-62**  
 Sampled: **06-14-11 11:00**  
 Received: **06-15-11 19:15**  
 Extracted: **06-21-11 13:30**  
 Cleaned Up: **06-24-11 15:00**  
 Analyzed: **06-24-11 23:43**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3760-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **88**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	44
11104-28-2	Aroclor 1221	BRL		ug/Kg	44
11141-16-5	Aroclor 1232	BRL		ug/Kg	44
53469-21-9	Aroclor 1242	BRL		ug/Kg	44
12672-29-6	Aroclor 1248	BRL		ug/Kg	44
11097-69-1	Aroclor 1254	300	2C (210)*	ug/Kg	44
11096-82-5	Aroclor 1260	BRL		ug/Kg	44
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	44
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	44

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	71 %	30 - 150 %
	Decachlorobiphenyl	7	6	78 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	74 %	30 - 150 %
	Decachlorobiphenyl	7	6	82 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124650**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-63**  
 Sampled: **06-14-11 11:10**  
 Received: **06-15-11 19:15**  
 Extracted: **06-21-11 13:30**  
 Cleaned Up: **06-24-11 15:00**  
 Analyzed: **06-25-11 00:07**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3760-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **91**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	BRL		ug/Kg	43
11097-69-1	Aroclor 1254	BRL		ug/Kg	43
11096-82-5	Aroclor 1260	BRL		ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>66</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>83</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>69</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>86</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124651**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-64**  
Sampled: **06-14-11 11:20**  
Received: **06-15-11 19:15**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-25-11 00:30**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3760-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **81**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	49
11104-28-2	Aroclor 1221	BRL		ug/Kg	49
11141-16-5	Aroclor 1232	BRL		ug/Kg	49
53469-21-9	Aroclor 1242	BRL		ug/Kg	49
12672-29-6	Aroclor 1248	BRL		ug/Kg	49
11097-69-1	Aroclor 1254	<b>1,100</b>	e 2C (990)*	ug/Kg	49
11096-82-5	Aroclor 1260	BRL		ug/Kg	49
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	49
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	49

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>69</b> %	30 - 150 %
	Decachlorobiphenyl	8	7	<b>85</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>71</b> %	30 - 150 %
	Decachlorobiphenyl	8	7	<b>85</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.  
e Indicates concentration exceeds calibration range for analyte.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124651**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-64RA1**  
 Sampled: **06-14-11 11:20**  
 Received: **06-15-11 19:15**  
 Extracted: **06-21-11 13:30**  
 Cleaned Up: **06-24-11 15:00**  
 Analyzed: **06-28-11 08:47**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3760-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **81**  
 Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	240
11104-28-2	Aroclor 1221	BRL		ug/Kg	240
11141-16-5	Aroclor 1232	BRL		ug/Kg	240
53469-21-9	Aroclor 1242	BRL		ug/Kg	240
12672-29-6	Aroclor 1248	BRL		ug/Kg	240
11097-69-1	Aroclor 1254	<b>1,200</b>	2C (990)*	ug/Kg	240
11096-82-5	Aroclor 1260	BRL		ug/Kg	240
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	240
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	240

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	7	<b>80</b> %	30 - 150 %
	Decachlorobiphenyl	8	7	<b>91</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	7	<b>83</b> %	30 - 150 %
	Decachlorobiphenyl	8	7	<b>88</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124652**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-65**  
Sampled: **06-14-11 11:30**  
Received: **06-15-11 19:15**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-25-11 00:54**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3760-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **82**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	48
11104-28-2	Aroclor 1221	BRL		ug/Kg	48
11141-16-5	Aroclor 1232	BRL		ug/Kg	48
53469-21-9	Aroclor 1242	BRL		ug/Kg	48
12672-29-6	Aroclor 1248	BRL		ug/Kg	48
11097-69-1	Aroclor 1254	<b>490</b>	e 2C (360)*	ug/Kg	48
11096-82-5	Aroclor 1260	BRL		ug/Kg	48
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	48
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	48

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>81</b> %	30 - 150 %
	Decachlorobiphenyl	8	8	<b>95</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	7	<b>87</b> %	30 - 150 %
	Decachlorobiphenyl	8	8	<b>99</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.  
e Indicates concentration exceeds calibration range for analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124652**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-65RA1**  
Sampled: **06-14-11 11:30**  
Received: **06-15-11 19:15**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-28-11 09:11**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3760-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **82**  
Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	240
11104-28-2	Aroclor 1221	BRL		ug/Kg	240
11141-16-5	Aroclor 1232	BRL		ug/Kg	240
53469-21-9	Aroclor 1242	BRL		ug/Kg	240
12672-29-6	Aroclor 1248	BRL		ug/Kg	240
11097-69-1	Aroclor 1254	510	2C (380)*	ug/Kg	240
11096-82-5	Aroclor 1260	BRL		ug/Kg	240
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	240
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	240

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	7	87 %	30 - 150 %
	Decachlorobiphenyl	8	8	94 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	7	93 %	30 - 150 %
	Decachlorobiphenyl	8	8	99 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124653**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-66**  
 Sampled: **06-14-11 11:45**  
 Received: **06-15-11 19:15**  
 Extracted: **06-21-11 13:30**  
 Cleaned Up: **06-24-11 15:00**  
 Analyzed: **06-25-11 01:18**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3760-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **82**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	48
11104-28-2	Aroclor 1221	BRL		ug/Kg	48
11141-16-5	Aroclor 1232	BRL		ug/Kg	48
53469-21-9	Aroclor 1242	BRL		ug/Kg	48
12672-29-6	Aroclor 1248	BRL		ug/Kg	48
11097-69-1	Aroclor 1254	240	2C (190)*	ug/Kg	48
11096-82-5	Aroclor 1260	300	2C (190)*	ug/Kg	48
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	48
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	48

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	69 %	30 - 150 %
	Decachlorobiphenyl	8	6	78 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	6	71 %	30 - 150 %
	Decachlorobiphenyl	8	7	82 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124654**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-67**  
Sampled: **06-14-11 11:57**  
Received: **06-15-11 19:15**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-25-11 01:42**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3760-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **84**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	47
11104-28-2	Aroclor 1221	BRL		ug/Kg	47
11141-16-5	Aroclor 1232	BRL		ug/Kg	47
53469-21-9	Aroclor 1242	BRL		ug/Kg	47
12672-29-6	Aroclor 1248	BRL		ug/Kg	47
11097-69-1	Aroclor 1254	58	2C (51)*	ug/Kg	47
11096-82-5	Aroclor 1260	62	2C (44)*	ug/Kg	47
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	47
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	47

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	83 %	30 - 150 %
	Decachlorobiphenyl	8	7	84 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	7	85 %	30 - 150 %
	Decachlorobiphenyl	8	7	90 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124655**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-68**  
Sampled: **06-14-11 12:15**  
Received: **06-15-11 19:15**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-25-11 02:05**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3760-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **88**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	BRL		ug/Kg	45
11097-69-1	Aroclor 1254	<b>140</b>	2C (130)*	ug/Kg	45
11096-82-5	Aroclor 1260	<b>96</b>	2C (58)*	ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	5	<b>65</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>69</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	5	<b>68</b> %	30 - 150 %
	Decachlorobiphenyl	8	6	<b>76</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

## EPA Method 8082 Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID: **124346**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-69**  
Sampled: **06-14-11 12:15**  
Received: **06-15-11 19:15**  
Extracted: **06-28-11 18:00**  
Cleaned Up: **06-30-11 00:00**  
Analyzed: **06-30-11 03:39**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3765-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **94**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	<b>110</b>	1C (82)*	ug/Kg	42
11097-69-1	Aroclor 1254	<b>160</b>	1C (130)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	3	<b>44</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>50</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	3	<b>49</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>53</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124347**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-70**  
 Sampled: **06-14-11 12:25**  
 Received: **06-15-11 19:15**  
 Extracted: **06-28-11 18:00**  
 Cleaned Up: **06-30-11 00:00**  
 Analyzed: **06-30-11 04:03**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3765-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **95**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	370	1C (260)*	ug/Kg	42
11097-69-1	Aroclor 1254	120	2C (100)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	2	26 % m	30 - 150 %
	Decachlorobiphenyl	7	2	35 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	2	29 % m	30 - 150 %
	Decachlorobiphenyl	7	3	42 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

2C Concentration reported from second column.

m Surrogate recovery outside recommended limits due to sample matrix interference.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124348**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-71**  
 Sampled: **06-14-11 12:25**  
 Received: **06-15-11 19:15**  
 Extracted: **06-21-11 13:30**  
 Cleaned Up: **06-24-11 15:00**  
 Analyzed: **06-25-11 04:28**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3760-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **90**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	44
11104-28-2	Aroclor 1221	BRL		ug/Kg	44
11141-16-5	Aroclor 1232	BRL		ug/Kg	44
53469-21-9	Aroclor 1242	BRL		ug/Kg	44
12672-29-6	Aroclor 1248	BRL		ug/Kg	44
11097-69-1	Aroclor 1254	160	2C (110)*	ug/Kg	44
11096-82-5	Aroclor 1260	140	p 2C (61)*	ug/Kg	44
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	44
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	44

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	79 %	30 - 150 %
	Decachlorobiphenyl	7	6	82 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	87 %	30 - 150 %
	Decachlorobiphenyl	7	7	87 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.  
 p Greater than 40% difference between primary and confirmation columns.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124349**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-72**  
 Sampled: **06-14-11 12:33**  
 Received: **06-15-11 19:15**  
 Extracted: **06-21-11 13:30**  
 Cleaned Up: **06-24-11 15:00**  
 Analyzed: **06-25-11 04:52**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3760-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **94**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	<b>460</b>	e 2C (390)*	ug/Kg	42
11097-69-1	Aroclor 1254	<b>280</b>	1C (220)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>74</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>93</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>84</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>101</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

2C Concentration reported from second column.

e Indicates concentration exceeds calibration range for analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124349**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-72RA1**  
Sampled: **06-14-11 12:33**  
Received: **06-15-11 19:15**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-28-11 09:35**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3760-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **94**  
Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	210
11104-28-2	Aroclor 1221	BRL		ug/Kg	210
11141-16-5	Aroclor 1232	BRL		ug/Kg	210
53469-21-9	Aroclor 1242	BRL		ug/Kg	210
12672-29-6	Aroclor 1248	<b>450</b>	1C (450)*	ug/Kg	210
11097-69-1	Aroclor 1254	<b>310</b>	1C (230)*	ug/Kg	210
11096-82-5	Aroclor 1260	BRL		ug/Kg	210
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	210
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	210

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>88</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>94</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>94</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>96</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124350**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-73**  
 Sampled: **06-14-11 13:05**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 14:18**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **82**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	48
11104-28-2	Aroclor 1221	BRL		ug/Kg	48
11141-16-5	Aroclor 1232	BRL		ug/Kg	48
53469-21-9	Aroclor 1242	BRL		ug/Kg	48
12672-29-6	Aroclor 1248	BRL		ug/Kg	48
11097-69-1	Aroclor 1254	BRL		ug/Kg	48
11096-82-5	Aroclor 1260	BRL		ug/Kg	48
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	48
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	48

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	5	<b>62</b> %	30 - 150 %
	Decachlorobiphenyl	8	6	<b>69</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	5	<b>61</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>68</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124351**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-74**  
 Sampled: **06-14-11 13:05**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 14:42**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **92**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	43
11104-28-2	Aroclor 1221	BRL		ug/Kg	43
11141-16-5	Aroclor 1232	BRL		ug/Kg	43
53469-21-9	Aroclor 1242	BRL		ug/Kg	43
12672-29-6	Aroclor 1248	BRL		ug/Kg	43
11097-69-1	Aroclor 1254	BRL		ug/Kg	43
11096-82-5	Aroclor 1260	BRL		ug/Kg	43
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	43
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	43

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	8	<b>105</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>98</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>104</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>101</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124352**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-75**  
 Sampled: **06-14-11 13:15**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 15:06**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **96**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	BRL		ug/Kg	41
11096-82-5	Aroclor 1260	BRL		ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	4	56 %	30 - 150 %
	Decachlorobiphenyl	7	5	71 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	4	56 %	30 - 150 %
	Decachlorobiphenyl	7	5	71 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124353**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-76**  
 Sampled: **06-14-11 13:15**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 15:30**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **96**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	BRL		ug/Kg	41
11096-82-5	Aroclor 1260	BRL		ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>80</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>96</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>82</b> %	30 - 150 %
	Decachlorobiphenyl	7	7	<b>98</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124354**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-77**  
Sampled: **06-14-11 13:30**  
Received: **06-15-11 19:15**  
Extracted: **06-22-11 03:00**  
Cleaned Up: **06-25-11 18:00**  
Analyzed: **06-27-11 17:19**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3761-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **95**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	BRL		ug/Kg	42
11097-69-1	Aroclor 1254	240	2C (230)*	ug/Kg	42
11096-82-5	Aroclor 1260	220	p 2C (93)*	ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	89 %	30 - 150 %
	Decachlorobiphenyl	7	6	85 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	96 %	30 - 150 %
	Decachlorobiphenyl	7	6	92 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.  
p Greater than 40% difference between primary and confirmation columns.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124355**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-78**  
 Sampled: **06-14-11 13:30**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 17:43**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **97**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	<b>86</b>	2C (68)*	ug/Kg	41
11096-82-5	Aroclor 1260	<b>67</b>	2C (43)*	ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	4	<b>63</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>67</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>70</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>76</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124356**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-79**  
 Sampled: **06-14-11 13:40**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 18:07**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **98**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	57	2C (49)*	ug/Kg	40
11096-82-5	Aroclor 1260	52	2C (40)*	ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	80 %	30 - 150 %
	Decachlorobiphenyl	7	5	80 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	87 %	30 - 150 %
	Decachlorobiphenyl	7	7	98 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124357**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-80**  
Sampled: **06-14-11 13:40**  
Received: **06-15-11 19:15**  
Extracted: **06-22-11 03:00**  
Cleaned Up: **06-25-11 18:00**  
Analyzed: **06-27-11 18:31**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3761-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **98**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>79</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>73</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>85</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>90</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124358**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-81**  
 Sampled: **06-14-11 13:50**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-29-11 16:10**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **99**  
 Dilution Factor: **25**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	1,000
11104-28-2	Aroclor 1221	BRL		ug/Kg	1,000
11141-16-5	Aroclor 1232	BRL		ug/Kg	1,000
53469-21-9	Aroclor 1242	BRL		ug/Kg	1,000
12672-29-6	Aroclor 1248	6,300	2C (4200)*	ug/Kg	1,000
11097-69-1	Aroclor 1254	BRL		ug/Kg	1,000
11096-82-5	Aroclor 1260	BRL		ug/Kg	1,000
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	1,000
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	1,000

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	7	na	d	30 - 150 %
Column	Decachlorobiphenyl	7	na	d	30 - 150 %
Second	Tetrachloro- <i>m</i> -xylene	7	na	d	30 - 150 %
Column	Decachlorobiphenyl	7	na	d	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124359**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-82**  
 Sampled: **06-14-11 13:50**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 19:18**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **98**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	<b>170</b>	1C (160)*	ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	<b>64</b>	2C (48)*	ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>82</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>74</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>85</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>81</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124360**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-83**  
 Sampled: **06-14-11 14:05**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 19:42**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **99**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	99	2C (84)*	ug/Kg	40
11096-82-5	Aroclor 1260	110	p 2C (53)*	ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	4	66 %	30 - 150 %
	Decachlorobiphenyl	7	4	57 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	70 %	30 - 150 %
	Decachlorobiphenyl	7	5	67 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.  
 p Greater than 40% difference between primary and confirmation columns.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124361**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-84**  
Sampled: **06-14-11 14:05**  
Received: **06-15-11 19:15**  
Extracted: **06-22-11 03:00**  
Cleaned Up: **06-25-11 18:00**  
Analyzed: **06-27-11 20:06**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3761-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **98**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	67	2C (55)*	ug/Kg	41
11096-82-5	Aroclor 1260	65	2C (43)*	ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	7	5	72 %
Column	Decachlorobiphenyl	7	5	67 %
Second	Tetrachloro- <i>m</i> -xylene	7	5	77 %
Column	Decachlorobiphenyl	7	5	75 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124362**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-85**  
 Sampled: **06-14-11 14:25**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 20:30**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **97**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	81	2C (76)*	ug/Kg	41
11096-82-5	Aroclor 1260	85	2C (69)*	ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	7	5	75 %
Column	Decachlorobiphenyl	7	5	71 %
Second	Tetrachloro- <i>m</i> -xylene	7	6	80 %
Column	Decachlorobiphenyl	7	6	81 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124363**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-86**  
 Sampled: **06-14-11 14:25**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 20:54**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **98**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	<b>110</b>	2C (67)*	ug/Kg	41
11096-82-5	Aroclor 1260	<b>84</b>	2C (56)*	ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	7	5	<b>77</b> %
Column	Decachlorobiphenyl	7	5	<b>73</b> %
Second	Tetrachloro- <i>m</i> -xylene	7	6	<b>81</b> %
Column	Decachlorobiphenyl	7	6	<b>81</b> %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124364**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-87**  
 Sampled: **06-14-11 14:30**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 22:29**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **98**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	63	2C (46)*	ug/Kg	40
11096-82-5	Aroclor 1260	53	2C (38)*	ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	72 %	30 - 150 %
	Decachlorobiphenyl	7	5	68 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	73 %	30 - 150 %
	Decachlorobiphenyl	7	5	72 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124365**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-88**  
 Sampled: **06-14-11 14:35**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 22:52**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **97**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	52	2C (44)*	ug/Kg	41
11096-82-5	Aroclor 1260	80	2C (57)*	ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	83 %	30 - 150 %
	Decachlorobiphenyl	7	5	79 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	86 %	30 - 150 %
	Decachlorobiphenyl	7	6	86 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124366**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-89**  
 Sampled: **06-14-11 14:52**  
 Received: **06-15-11 19:15**  
 Extracted: **06-22-11 03:00**  
 Cleaned Up: **06-25-11 18:00**  
 Analyzed: **06-27-11 23:16**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3761-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **98**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	73	1C (71)*	ug/Kg	40
11096-82-5	Aroclor 1260	110	2C (79)*	ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	87 %	30 - 150 %
	Decachlorobiphenyl	7	5	76 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	91 %	30 - 150 %
	Decachlorobiphenyl	7	6	83 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124367**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-90**  
 Sampled: **06-14-11 14:57**  
 Received: **06-15-11 19:15**  
 Extracted: **06-23-11 20:30**  
 Cleaned Up: **06-25-11 20:00**  
 Analyzed: **06-28-11 06:01**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3762-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **96**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	90	2C (55)*	ug/Kg	41
11096-82-5	Aroclor 1260	76	2C (51)*	ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	98 %	30 - 150 %
	Decachlorobiphenyl	7	6	86 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	104 %	30 - 150 %
	Decachlorobiphenyl	7	6	93 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124368**  
Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **142678-91**  
Sampled: **06-14-11 15:05**  
Received: **06-15-11 19:15**  
Extracted: **06-23-11 20:30**  
Cleaned Up: **06-25-11 20:00**  
Analyzed: **06-28-11 06:25**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3762-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **31 g**  
Final Volume: **1 mL**  
Percent Solids: **98**  
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	<b>69</b>	2C (46)*	ug/Kg	40
11096-82-5	Aroclor 1260	<b>52</b>	2C (39)*	ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>86</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>74</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>94</b> %	30 - 150 %
	Decachlorobiphenyl	7	6	<b>83</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124369**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-92**  
 Sampled: **06-14-11 15:10**  
 Received: **06-15-11 19:15**  
 Extracted: **06-23-11 20:30**  
 Cleaned Up: **06-25-11 20:00**  
 Analyzed: **06-28-11 06:48**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3762-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **97**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	4	<b>56</b> %	30 - 150 %
	Decachlorobiphenyl	7	3	<b>51</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	4	<b>62</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>57</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124370**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-93**  
 Sampled: **06-14-11 14:00**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 22:00**  
 Cleaned Up: **06-18-11 01:00**  
 Analyzed: **06-20-11 19:34**  
 Analyst: **CRL**

Matrix: **Aqueous**  
 Container: **1 L Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-2696-F**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **870 mL**  
 Final Volume: **1 mL**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.2
11104-28-2	Aroclor 1221	BRL		ug/L	0.2
11141-16-5	Aroclor 1232	BRL		ug/L	0.2
53469-21-9	Aroclor 1242	BRL		ug/L	0.2
12672-29-6	Aroclor 1248	BRL		ug/L	0.2
11097-69-1	Aroclor 1254	BRL		ug/L	0.2
11096-82-5	Aroclor 1260	BRL		ug/L	0.2
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/L	0.2
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/L	0.2

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	0.23	0.59	257 % m
Column	Decachlorobiphenyl	0.23	0.28	122 %
Second	Tetrachloro- <i>m</i> -xylene	0.23	0.32	141 %
Column	Decachlorobiphenyl	0.23	0.19	84 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.  
 m Surrogate recovery outside recommended limits due to sample matrix interference.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **124371**  
 Project: **EH&E/17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **142678-94**  
 Sampled: **06-14-11 14:00**  
 Received: **06-15-11 19:15**  
 Extracted: **06-16-11 22:00**  
 Cleaned Up: **06-18-11 01:00**  
 Analyzed: **06-20-11 19:58**  
 Analyst: **CRL**

Matrix: **Aqueous**  
 Container: **1 L Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-2696-F**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **870 mL**  
 Final Volume: **1 mL**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.2
11104-28-2	Aroclor 1221	BRL		ug/L	0.2
11141-16-5	Aroclor 1232	BRL		ug/L	0.2
53469-21-9	Aroclor 1242	BRL		ug/L	0.2
12672-29-6	Aroclor 1248	BRL		ug/L	0.2
11097-69-1	Aroclor 1254	BRL		ug/L	0.2
11096-82-5	Aroclor 1260	BRL		ug/L	0.2
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/L	0.2
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/L	0.2

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	0.23	0.33	<b>146</b> %	30 - 150 %
Column	Decachlorobiphenyl	0.23	0.17	<b>75</b> %	30 - 150 %
Second	Tetrachloro- <i>m</i> -xylene	0.23	0.22	<b>95</b> %	30 - 150 %
Column	Decachlorobiphenyl	0.23	0.17	<b>73</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.

## Project Narrative

Project: **EH&E/17228**  
Client: **Environmental Health & Engineering, Inc.**

Lab ID: **142678**  
Received: **06-15-11 19:15**

### A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1. 124613 through 142621 had sample dates on the chain of custody as 6/14/11. Same samples had dates of 6/13/11 on containers. Samples logged in as sampled on 6/13/11 per Karrie-Ann Myer.

### B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1. EPA 8082 Non-conformance: Sample 142678-81. Sample did not have measureable surrogate recoveries due to required sample dilution.
2. EPA 8082 Non-conformance: Samples 142678-19, -21 -29, -30, -32, -34, -35, -36, -39, -40, -55, -60, -64, -65, -72. Reported results for selected analytes exceeded the high standard of the associated calibration curve. Results are estimated. Sample was reanalyzed and reported with all analytes within calibration.
3. EPA 8082 Note: Samples 142678-35 through -39, -41, -42, -43, -45, -46, -60, -64, -65, -72, -81. Sample were diluted prior to analysis. Dilution was required to keep all target analytes within calibration. Elevated reporting limits are above CAM recommended reporting limits.
4. EPA 8082 Non-conformance: Samples 142678-70, -93. Samples had surrogate recoveries outside recommended limits due to sample matrix interference.
5. EPA 8082 Non-conformance: Samples 142678-71, -77, -83. Samples had analyte concentration with greater than 40% difference between the primary and confirmation columns.
6. EPA 8082 Note: Sample 142678-81. Sample had extreme weathering of heavy end of Aroclor 1248 pattern.
7. EPA 8082 Non-conformance: Samples 142678-03, -04, -07, -08, -37, -38, -41, -42, -45, -46. Matrix spike and matrix spike duplicate samples had analyte recoveries above recommended limits due to the presence of multiple Aroclors native to the samples.
8. EPA 8082 Note: Samples 142678-01, -02, -05, 09, -19, -21, -22, -25 through -36, -40, -44, -47, -49, -50 through -92. Weighted average used to calculate concentrations, due to multiple Aroclors and non-target matrix interference.

Environmental  
Health &  
Engineering, Inc.

# CHAIN OF CUSTODY FORM

COC 1 of 2  
DATE: 6/13/2011

FROM: Environmental Health and Engineering, Inc.  
117 Fourth Avenue  
Needham, MA 02494-2725

TO: Groundwater Analytical

Please send invoices to ATTN: Accounts Payable  
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17228

The cost of this analysis will be covered by EH&E Purchase Order # 1002033

For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
124581	S Bulk	PCB 8082 w/ Soxhlet Extraction	0755 / 6/13/2011
124582	D 5011		
124583	ms/msd	parent sample: 124 581	
124584	S		
124585	D		
124586	ms/msd	parent: 124584	
124587	S		0810 / 6/13/2011
124588	D		
124589	ms/msd	parent: 124587	
124590	S		0810 / 6/13/2011
124591	D		
124592	ms/msd	parent: 124590	
124593	S		0830 / 6/13/2011
124594	S		0830 6/13/2011
124595	S		0845 6/13/2011
124596	S		0845 6/13/2011

## Special Instructions:

☒ Standard turn around time

☐ Rush by \_\_\_\_\_ date/time

☐ Other \_\_\_\_\_

☐ Fax results 781-247-4305

☐ RETURN SAMPLES

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☒ Additional report recipient

crampisano@ehinc.com

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Each signatory please return one copy of this form to the above address

Relinquished by: [Signature] of Environmental Health & Engineering, Inc. Date: 6/14/11

Received by: Alan Maddigan of (company name) Groundwater A. Date: 6/15/11

Relinquished by: Alan Maddigan of (company name) Groundwater A. Date: 6/15/11

Received by: [Signature] of (company name) OWA Date: 6/15/11

Relinquished by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_

Received by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_

Lab Data  
Received by: \_\_\_\_\_ of Environmental Health & Engineering, Inc., Date: \_\_\_\_\_

Environmental  
Health &  
Engineering, Inc.

# CHAIN OF CUSTODY FORM

COC 2 of 3  
DATE: 6/13/2011

FROM: Environmental Health and Engineering, Inc.  
117 Fourth Avenue  
Needham, MA 02494-2725

TO: Groundwater Analytical

Please send invoices to ATTN: Accounts Payable  
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17228

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For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
124597	S Bulk	PCB 8082 w/ Soxhlet Extraction	0850 6/13/2011
124598	S Soil		0855
124599	S		0857
124600	S		0859
124601	S		0906
124602	S		0908
124603	S		0922
124604	S		0924
124605	S		0949
124606	S		0958
124607	S		1006
124608	S		1003
124609	S		1006
124610	S		1008
124611	S		1023
124612	D		1023 6/13/2011

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Received by: Alan Maddigan of (company name) Groundwater A. Date: 6/15/11

Relinquished by: Alan Maddigan of (company name) Groundwater A. Date: 6/15/11

Received by: [Signature] of (company name) GWN Date: 6/15/11

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Received by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_

Lab Data

Received by: \_\_\_\_\_ of Environmental Health & Engineering, Inc. Date: \_\_\_\_\_

Environmental  
Health &  
Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: 6/14/11

FROM: Environmental Health and Engineering, Inc.  
117 Fourth Avenue  
Needham, MA 02494-2725

TO: GWA

Please send invoices to ATTN: Accounts Payable  
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17228

The cost of this analysis will be covered by EH&E Purchase Order # 1002033

For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
124613	ms/msd Bulk soil	parent: 124611 EPA 8082	1023 - 6/14/11
124614	S	Soxhlet extr.	1024
124615	D		1024
124616	ms/msd	parent: 124614	1028
124617	S		1028
124618	D		1045
124619	ms/msd	parent: 124617	1045
124620	S		1045
124621	S		1048
124622	D	VOID	1048
124623	ms/msd	parent: 124621 VOID	1048
124624	S		1057
124625	D	VOID	1057
124626	ms/msd	parent: 124624 VOID	1057
124627	S		1100
124628	S		1126

Special instructions:

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☐ Other \_\_\_\_\_

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Received by: Alan Maddigan of (company name) Groundwater a. Date: 6/15/11

Relinquished by: Alan Maddigan of (company name) Groundwater a. Date: 6/15/11

Received by: [Signature] of (company name) GWA Date: 6/15/11

Relinquished by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_

Received by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_

Lab Data

Received by: \_\_\_\_\_ of Environmental Health & Engineering, Inc. , Date: \_\_\_\_\_



Environmental  
Health &  
Engineering, Inc.

# CHAIN OF CUSTODY FORM

DATE: 6/14/11

FROM: Environmental Health and Engineering, Inc.  
117 Fourth Avenue  
Needham, MA 02494-2725

TO: GWA

Please send invoices to ATTN: Accounts Payable  
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17228

The cost of this analysis will be covered by EH&E Purchase Order # 1002033

For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER: Time/Date/No.
124631	Bulk soil	EPA 8082 (PCBs)	1130 6/13/11
124634		Sorhlet extr.	1134
124637			1137
124640			1143
124643			1010 6/14/11
124644			1020
124645			1035
124646			1045
124647			1050
124648			1105
124649			1100
124650			1110
124651			1120
124652			1130
124653			1145
124654			1157

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☐ Rush by \_\_\_\_\_ date/time

☐ Other \_\_\_\_\_

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Received by: Alan Maddigan of (company name) Groundwater A Date: 6/15/11

Relinquished by: Alan Maddigan of (company name) Groundwater A Date: 6/15/11

Received by: [Signature] of (company name) GWA Date: 6/15/11

Relinquished by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_

Received by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_

Lab Data  
Received by: \_\_\_\_\_ of Environmental Health & Engineering, Inc. Date: \_\_\_\_\_

Environmental  
Health &  
Engineering, Inc.

# CHAIN OF CUSTODY FORM

DATE: 6/14/11

FROM: Environmental Health and Engineering, Inc.  
117 Fourth Avenue  
Needham, MA 02494-2725

TO: GWA

Please send invoices to ATTN: Accounts Payable  
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17228

The cost of this analysis will be covered by EH&E Purchase Order # 1002033

For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
124655	Bulk-soil	EPA 8082 - (PCBS)	1215 6/14/11
124346		soxhlet extr.	1215
124347			1225
124348			1225
124349			1233
124350			1305
124351			1305
124352			1315
124353			1315
124354			1330
124355			1330
124356			1340
124357			1340
124358			1350
124359			1350
124360			1405

## Special instructions:

☒ Standard turn around time

☐ Rush by \_\_\_\_\_ date/time

☐ Other \_\_\_\_\_

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Relinquished by: Alan Maddigan of (company name) Groundwater Date: 6/15/11

Received by: [Signature] of (company name) GWA Date: 6/15/11

Relinquished by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_

Received by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_

Lab Data

Received by: \_\_\_\_\_ of Environmental Health & Engineering, Inc. Date: \_\_\_\_\_

**Environmental  
Health &  
Engineering, Inc.**

**CHAIN OF CUSTODY FORM**

DATE: 6/14/11

FROM: Environmental Health and Engineering, Inc.  
117 Fourth Avenue  
Needham, MA 02494-2725

TO: GWA

Please send invoices to ATTN: Accounts Payable  
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In all correspondence regarding this matter, please refer to EH&E Project # 17228

The cost of this analysis will be covered by EH&E Purchase Order # 1002033

For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
124361	Bulk-Soil	EPA 8082 - (PCBs)	1405 6/14/11
124362		Soxhlet extr.	1425
124363			1425
124364			1430
124365			1435
124366			1452
124367			1457
124368			1505
124369			1510
124370	Water	EPA 8082 - PCBs	1400 6/14/11
124371		soxhlet extr.	1400

**Special instructions:**

☒ Standard turn around time

☐ Rush by \_\_\_\_\_ date/time

☐ Other \_\_\_\_\_

☐ Fax results 781-247-4305

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Relinquished by: Alan Maddigan of (company name) Groundwater a Date: 6/15/11

Received by: [Signature] of (company name) GWA Date: 6/15/11

Relinquished by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_

Received by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_

Lab Data  
Received by: \_\_\_\_\_ of Environmental Health & Engineering, Inc. Date: \_\_\_\_\_



## Quality Assurance/Quality Control

### A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*, US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste*, US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

### B. Definitions

**Batches** are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

**Laboratory Control Samples** are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

**Method Blanks** are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

**Surrogate Compounds** are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

## Quality Control Report Laboratory Control Samples

Category:	<b>EPA 8082</b>	LCS	Instrument ID:	<b>GC-13 Agilent 6890</b>	LCSD	Instrument ID:	<b>GC-13 Agilent 6890</b>
QC Batch ID:	<b>PB-3762-X</b>		Extracted:	<b>06-23-11 20:30</b>		Extracted:	<b>06-23-11 20:30</b>
Matrix:	<b>Soil</b>		Cleaned Up:	<b>06-25-11 20:00</b>		Cleaned Up:	<b>06-25-11 20:00</b>
Units:	<b>ug/Kg</b>		Analyzed:	<b>06-28-11 00:04</b>		Analyzed:	<b>06-28-11 00:28</b>
			Analyst:	<b>CRL</b>		Analyst:	<b>CRL</b>

CAS Number	Analyte	LCS					LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD				
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD	
12674-11-2	Aroclor 1016	170	170	170	101%	105%	170	160	160	93%	95%	7 %	10 %	40 - 140%	30 %	
11096-82-5	Aroclor 1260	170	170	180	101%	108%	170	170	180	104%	110%	3 %	1 %	40 - 140%	30 %	
QC Surrogate Compound		Surrogate Recovery												QC Limits		
Tetrachloro- <i>m</i> -xylene		6.7	6.7	6.8	101%	102%	6.7	5.8	5.9	88%	89%			30 - 150 %		
Decachlorobiphenyl		6.7	5.9	6.4	89%	96%	6.7	6.1	6.5	92%	98%			30 - 150 %		

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** All calculations performed prior to rounding. Quality Control Limits are defined by the methodology,  
or alternatively based upon the historical average recovery plus or minus three standard deviation units.

## Quality Control Report Method Blank

Category: **EPA Method 8082**  
QC Batch ID: **PB-3762-X**  
Matrix: **Soil**

Instrument ID: **GC-13 Agilent 6890**  
Extracted: **06-23-11 20:30**  
Cleaned Up: **06-25-11 20:00**  
Analyzed: **06-27-11 23:40**  
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	6.7	6.5	<b>98</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	5.9	<b>88</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	6.7	6.9	<b>103</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	6.2	<b>93</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.

## Quality Control Report Laboratory Control Samples

Category:	<b>EPA 8082</b>	LCS	Instrument ID:	<b>GC-11 Agilent 6890</b>	LCSD	Instrument ID:	<b>GC-11 Agilent 6890</b>
QC Batch ID:	<b>PB-3757-X</b>	Extracted:	<b>06-16-11 14:15</b>	Extracted:	<b>06-16-11 14:15</b>		
Matrix:	<b>Soil</b>	Cleaned Up:	<b>06-20-11 21:00</b>	Cleaned Up:	<b>06-20-11 21:00</b>		
Units:	<b>ug/Kg</b>	Analyzed:	<b>06-21-11 10:34</b>	Analyzed:	<b>06-21-11 10:57</b>		
		Analyst:	<b>CRL</b>	Analyst:	<b>CRL</b>		

CAS Number	Analyte	LCS					LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD				
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD	
12674-11-2	Aroclor 1016	170	150	140	90%	85%	170	160	150	94%	92%	4 %	7 %	40 - 140%	30 %	
11096-82-5	Aroclor 1260	170	160	150	97%	89%	170	170	160	102%	96%	5 %	8 %	40 - 140%	30 %	

QC Surrogate Compound	Surrogate Recovery												QC Limits	
Tetrachloro- <i>m</i> -xylene	6.7	5.2	5	79%	75%	6.7	5.4	5.2	82%	78%			30 - 150 %	
Decachlorobiphenyl	6.7	6.5	6.2	97%	92%	6.7	6.5	6.6	98%	99%			30 - 150 %	

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

## Quality Control Report Method Blank

Category: **EPA Method 8082**  
QC Batch ID: **PB-3757-X**  
Matrix: **Soil**

Instrument ID: **GC-11 Agilent 6890**  
Extracted: **06-16-11 14:15**  
Cleaned Up: **06-20-11 21:00**  
Analyzed: **06-21-11 10:10**  
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	6.7	5.6	<b>85</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	6	<b>91</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	6.7	5.4	<b>82</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	6.7	<b>101</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.

## Quality Control Report Laboratory Control Samples

<b>Category:</b> EPA 8082 <b>QC Batch ID:</b> PB-3758-X <b>Matrix:</b> Soil <b>Units:</b> ug/Kg	<b>LCS</b> <b>Instrument ID:</b> GC-11 Agilent 6890 <b>Extracted:</b> 06-16-11 17:30 <b>Cleaned Up:</b> 06-21-11 23:00 <b>Analyzed:</b> 06-22-11 02:13 <b>Analyst:</b> CRL	<b>LCSD</b> <b>Instrument ID:</b> GC-11 Agilent 6890 <b>Extracted:</b> 06-16-11 17:30 <b>Cleaned Up:</b> 06-21-11 23:00 <b>Analyzed:</b> 06-22-11 02:36 <b>Analyst:</b> CRL
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CAS Number	Analyte	LCS					LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD				
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD	
12674-11-2	Aroclor 1016	170	180	160	109%	98%	170	170	160	104%	97%	5 %	1 %	40 - 140%	30 %	
11096-82-5	Aroclor 1260	170	180	170	109%	105%	170	170	170	102%	104%	7 %	1 %	40 - 140%	30 %	
QC Surrogate Compound		Surrogate Recovery												QC Limits		
Tetrachloro- <i>m</i> -xylene		6.7	6	5.5	91%	83%	6.7	6	5.6	91%	84%			30 - 150 %		
Decachlorobiphenyl		6.7	6.1	7.1	91%	106%	6.7	6	7	91%	105%			30 - 150 %		

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** All calculations performed prior to rounding. Quality Control Limits are defined by the methodology,  
 or alternatively based upon the historical average recovery plus or minus three standard deviation units.

## Quality Control Report Method Blank

Category: **EPA Method 8082**  
QC Batch ID: **PB-3758-X**  
Matrix: **Soil**

Instrument ID: **GC-11 Agilent 6890**  
Extracted: **06-16-11 17:30**  
Cleaned Up: **06-21-11 23:00**  
Analyzed: **06-22-11 01:49**  
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	6.7	6.1	<b>92</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	6.2	<b>94</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	6.7	5.8	<b>87</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	6.9	<b>104</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.

**Quality Control Report  
Laboratory Control Sample**

Category: **EPA Method 608 PCBs**  
QC Batch ID: **PB-2696-F**  
Matrix: **Aqueous**  
Units: **ug/L**

Instrument ID: **GC-13 Agilent 6890**  
Extracted: **06-16-11 22:00**  
Cleaned Up: **06-18-11 01:00**  
Analyzed: **06-20-11 15:12**  
Analyst: **CRL**

CAS Number	Analyte	Spiked	Measured		Recovery		QC Limits
			1st Column	2nd Column	1st Column	2nd Column	
12674-11-2	Aroclor 1016	5.0	4.9	4.7	<b>99 %</b>	<b>93 %</b>	40 - 140 %
11096-82-5	Aroclor 1260	5.0	4.8	4.7	<b>96 %</b>	<b>94 %</b>	40 - 140 %
QC Surrogate Compound		Spiked	Measured		Recovery		QC Limits
Tetrachloro- <i>m</i> -xylene		0.20	0.18	0.17	<b>91 %</b>	<b>87 %</b>	30 - 150 %
Decachlorobiphenyl		0.20	0.16	0.16	<b>81 %</b>	<b>81 %</b>	30 - 150 %

**Method Reference:** Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).  
Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** All calculations performed prior to rounding. Quality Control Limits are defined by the methodology,  
or alternatively based upon the historical average recovery plus or minus three standard deviation units.



## Quality Control Report Method Blank

Category: **EPA Method 608 PCBs**  
QC Batch ID: **PB-2696-F**  
Matrix: **Aqueous**

Instrument ID: **GC-13 Agilent 6890**  
Extracted: **06-16-11 22:00**  
Cleaned Up: **06-18-11 01:00**  
Analyzed: **06-20-11 14:48**  
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.20
11104-28-2	Aroclor 1221	BRL		ug/L	0.20
11141-16-5	Aroclor 1232	BRL		ug/L	0.20
53469-21-9	Aroclor 1242	BRL		ug/L	0.20
12672-29-6	Aroclor 1248	BRL		ug/L	0.20
11097-69-1	Aroclor 1254	BRL		ug/L	0.20
11096-82-5	Aroclor 1260	BRL		ug/L	0.20
QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	0.20	0.18	<b>89</b> %	30 - 150 %
	Decachlorobiphenyl	0.20	0.15	<b>77</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	0.20	0.17	<b>86</b> %	30 - 150 %
	Decachlorobiphenyl	0.20	0.15	<b>76</b> %	30 - 150 %

**Method Reference:** Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986). Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

## Quality Control Report Laboratory Control Samples

Category:	<b>EPA 8082</b>	LCS	Instrument ID:	<b>GC-13 Agilent 6890</b>	LCSD	Instrument ID:	<b>GC-13 Agilent 6890</b>
QC Batch ID:	<b>PB-3765-X</b>		Extracted:	<b>06-28-11 18:00</b>		Extracted:	<b>06-28-11 18:00</b>
Matrix:	<b>Soil</b>		Cleaned Up:	<b>06-30-11 00:00</b>		Cleaned Up:	<b>06-30-11 00:00</b>
Units:	<b>ug/Kg</b>		Analyzed:	<b>06-30-11 02:27</b>		Analyzed:	<b>06-30-11 02:51</b>
			Analyst:	<b>CRL</b>		Analyst:	<b>CRL</b>

CAS Number	Analyte	LCS					LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD				
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD	
12674-11-2	Aroclor 1016	170	180	170	108%	103%	170	170	160	101%	99%	7 %	4 %	40 - 140%	30 %	
11096-82-5	Aroclor 1260	170	170	170	102%	104%	170	170	170	100%	103%	2 %	1 %	40 - 140%	30 %	
QC Surrogate Compound		Surrogate Recovery												QC Limits		
Tetrachloro- <i>m</i> -xylene		6.7	6.9	6.9	103%	104%	6.7	6.5	6.4	98%	96%			30 - 150 %		
Decachlorobiphenyl		6.7	5.8	6	88%	90%	6.7	5.6	5.9	85%	89%			30 - 150 %		

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

## Quality Control Report Method Blank

Category: **EPA Method 8082**  
QC Batch ID: **PB-3765-X**  
Matrix: **Soil**

Instrument ID: **GC-13 Agilent 6890**  
Extracted: **06-28-11 18:00**  
Cleaned Up: **06-30-11 00:00**  
Analyzed: **06-30-11 02:04**  
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	6.7	7	<b>106</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	5.8	<b>86</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	6.7	7	<b>105</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	6	<b>90</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.

## Quality Control Report Laboratory Control Samples

Category:	<b>EPA 8082</b>	LCS	Instrument ID:	<b>GC-13 Agilent 6890</b>	LCSD	Instrument ID:	<b>GC-13 Agilent 6890</b>
QC Batch ID:	<b>PB-3760-X</b>		Extracted:	<b>06-21-11 13:30</b>		Extracted:	<b>06-21-11 13:30</b>
Matrix:	<b>Soil</b>		Cleaned Up:	<b>06-24-11 15:00</b>		Cleaned Up:	<b>06-24-11 15:00</b>
Units:	<b>ug/Kg</b>		Analyzed:	<b>06-24-11 18:10</b>		Analyzed:	<b>06-24-11 18:34</b>
			Analyst:	<b>CRL</b>		Analyst:	<b>CRL</b>

CAS Number	Analyte	LCS					LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD				
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD	
12674-11-2	Aroclor 1016	170	160	160	98%	98%	170	150	160	92%	94%	7 %	5 %	40 - 140%	30 %	
11096-82-5	Aroclor 1260	170	170	170	102%	104%	170	170	170	100%	103%	2 %	1 %	40 - 140%	30 %	
QC Surrogate Compound		Surrogate Recovery												QC Limits		
Tetrachloro- <i>m</i> -xylene		6.7	6.2	6.1	93%	92%	6.7	5.3	5.3	80%	80%			30 - 150 %		
Decachlorobiphenyl		6.7	6.3	6.6	95%	100%	6.7	6.2	6.6	94%	99%			30 - 150 %		

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

## Quality Control Report Method Blank

Category: **EPA Method 8082**  
QC Batch ID: **PB-3760-X**  
Matrix: **Soil**

Instrument ID: **GC-13 Agilent 6890**  
Extracted: **06-21-11 13:30**  
Cleaned Up: **06-24-11 15:00**  
Analyzed: **06-24-11 17:46**  
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	6.7	5.4	<b>82</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	5.9	<b>89</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	6.7	5.4	<b>81</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	6.2	<b>93</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.

## Quality Control Report Laboratory Control Samples

Category:	<b>EPA 8082</b>	LCS	Instrument ID:	<b>GC-13 Agilent 6890</b>	LCSD	Instrument ID:	<b>GC-13 Agilent 6890</b>
QC Batch ID:	<b>PB-3761-X</b>		Extracted:	<b>06-22-11 03:00</b>		Extracted:	<b>06-22-11 03:00</b>
Matrix:	<b>Soil</b>		Cleaned Up:	<b>06-25-11 18:00</b>		Cleaned Up:	<b>06-25-11 18:00</b>
Units:	<b>ug/Kg</b>		Analyzed:	<b>06-27-11 12:19</b>		Analyzed:	<b>06-27-11 12:43</b>
			Analyst:	<b>CRL</b>		Analyst:	<b>CRL</b>

CAS Number	Analyte	LCS					LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD				
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD	
12674-11-2	Aroclor 1016	170	140	150	87%	88%	170	170	170	102%	101%	17 %	15 %	40 - 140%	30 %	
11096-82-5	Aroclor 1260	170	160	160	95%	98%	170	170	170	101%	105%	6 %	7 %	40 - 140%	30 %	
QC Surrogate Compound		Surrogate Recovery												QC Limits		
Tetrachloro- <i>m</i> -xylene		6.7	5.2	5.3	79%	80%	6.7	6.5	6.6	98%	99%			30 - 150 %		
Decachlorobiphenyl		6.7	5.9	6.2	89%	93%	6.7	6.2	6.4	93%	97%			30 - 150 %		

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** All calculations performed prior to rounding. Quality Control Limits are defined by the methodology,  
or alternatively based upon the historical average recovery plus or minus three standard deviation units.

## Quality Control Report Method Blank

Category: **EPA Method 8082**  
QC Batch ID: **PB-3761-X**  
Matrix: **Soil**

Instrument ID: **GC-13 Agilent 6890**  
Extracted: **06-22-11 03:00**  
Cleaned Up: **06-25-11 18:00**  
Analyzed: **06-27-11 11:55**  
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	6.7	6.1	<b>92</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	6.1	<b>91</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	6.7	6.4	<b>96</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	6.2	<b>94</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.

## Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states. Copies of our current certificates may be obtained from our website:

<http://www.groundwateranalytical.com/qualifications.htm>

### CONNECTICUT

**Department of Health Services, PH-0586**

Potable Water, Wastewater, Solid Waste and Soil

[http://www.ct.gov/dph/lib/dph/environmental\\_health/environmental\\_laboratories/pdf/Out\\_State.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/Out_State.pdf)

### MASSACHUSETTS

**Department of Environmental Protection, M-MA-103**

Potable Water and Non-Potable Water

<http://public.dep.state.ma.us/labcert/labcert.aspx>

**Department of Labor,**

Asbestos Analytical Services, Class A

**Division of Occupational Safety, AA000195**

[http://www.mass.gov/dos/forms/la-rpt\\_list\\_aa.pdf](http://www.mass.gov/dos/forms/la-rpt_list_aa.pdf)

### NEW HAMPSHIRE

**Department of Environmental Services, 202708**

Potable Water, Non-Potable Water, Solid and Chemical Materials

<http://www4.egov.nh.gov/DES/NHELAP>

### NEW YORK

**Department of Health, 11754**

Potable Water, Non-Potable Water, Solid and Hazardous Waste

<http://www.wadsworth.org/labcert/elap/comm.html>

### RHODE ISLAND

**Department of Health,**

Potable and Non-Potable Water Microbiology, Organic and Inorganic Chemistry

**Division of Laboratories, LAO00054**

<http://www.health.ri.gov/labs/outofstatelabs.pdf>

### U.S. DEPARTMENT OF AGRICULTURE

**USDA, Soil Permit, S-53921**

Foreign soil import permit

### VERMONT

**Department of Health, VT-87643**

Potable Water

[http://healthvermont.gov/enviro/ph\\_lab/water\\_test.aspx#cert](http://healthvermont.gov/enviro/ph_lab/water_test.aspx#cert)



## Certifications and Approvals

**MASSACHUSETTS**
**Department of Environmental Protection, M-MA-103**

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

**Potable Water (Drinking Water)**

Analyte	Method
1,2-Dibromo-3-Chloropropane	EPA 504.1
1,2-Dibromoethane	EPA 504.1
Alkalinity, Total	SM 2320-B
Antimony	EPA 200.8
Arsenic	EPA 200.8
Barium	EPA 200.7
Barium	EPA 200.8
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chlorine, Residual Free	SM 4500-CL-G
Chromium	EPA 200.7
Copper	EPA 200.7
Copper	EPA 200.8
Cyanide, Total	Lachat 10-204-00-1-A
E. Coli (Treatment and Distribution)	Enz. Sub. SM 9223
E. Coli (Treatment and Distribution)	NA-MUG SM 9222-G
Fecal Coliform (Source Water)	MF SM 9222-D
Fluoride	EPA 300.0
Fluoride	SM 4500-F-C
Haloacetic Acids	EPA 552.2
Heterotrophic Plate Count	SM 9215-B
Lead	EPA 200.8
Mercury	EPA 245.1
Nickel	EPA 200.7
Nickel	EPA 200.8
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Nitrite-N	EPA 300.0
Nitrite-N	Lachat 10-107-04-1-C
pH	SM 4500-H-B
Selenium	EPA 200.8
Silver	EPA 200.7
Silver	EPA 200.8
Sodium	EPA 200.7
Sulfate	EPA 300.0
Thallium	EPA 200.8
Total Coliform (Treatment and Distribution)	Enz. Sub. SM 9223
Total Coliform (Treatment and Distribution)	MF SM 9222-B
Total Dissolved Solids	SM 2540-C
Trihalomethanes	EPA 524.2
Turbidity	SM 2130-B
Volatile Organic Compounds	EPA 524.2

**Non-Potable Water (Wastewater)**

Analyte	Method
Aldrin	EPA 608
Alkalinity, Total	SM 2320-B
Alpha-BHC	EPA 608
Aluminum	EPA 200.7

**Non-Potable Water (Wastewater)**

Analyte	Method
Aluminum	EPA 200.8
Ammonia-N	Lachat 10-107-06-1-B
Antimony	EPA 200.7
Antimony	EPA 200.8
Arsenic	EPA 200.7
Arsenic	EPA 200.8
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Beta-BHC	EPA 608
Biochemical Oxygen Demand	SM 5210-B
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chemical Oxygen Demand	SM 5220-D
Chlordane	EPA 608
Chloride	EPA 300.0
Chlorine, Total Residual	SM 4500-CL-G
Chromium	EPA 200.7
Chromium	EPA 200.8
Cobalt	EPA 200.7
Cobalt	EPA 200.8
Copper	EPA 200.7
Copper	EPA 200.8
Cyanide, Total	Lachat 10-204-00-1-A
DDD	EPA 608
DDE	EPA 608
DDT	EPA 608
Delta-BHC	EPA 608
Dieldrin	EPA 608
Endosulfan I	EPA 608
Endosulfan II	EPA 608
Endosulfan Sulfate	EPA 608
Endrin	EPA 608
Endrin Aldehyde	EPA 608
Gamma-BHC	EPA 608
Hardness (CaCO <sub>3</sub> ), Total	EPA 200.7
Hardness (CaCO <sub>3</sub> ), Total	SM 2340-B
Heptachlor	EPA 608
Heptachlor Epoxide	EPA 608
Iron	EPA 200.7
Kjeldahl-N	Lachat 10-107-06-02-D
Lead	EPA 200.7
Magnesium	EPA 200.7
Manganese	EPA 200.7
Manganese	EPA 200.8
Mercury	EPA 245.1
Molybdenum	EPA 200.7
Molybdenum	EPA 200.8
Nickel	EPA 200.7
Nickel	EPA 200.8
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Non-Filterable Residue	SM 2540-D
Oil and Grease	EPA 1664

## Certifications and Approvals

**MASSACHUSETTS****Department of Environmental Protection, M-MA-103**

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

**Non-Potable Water (Wastewater)**

<b>Analyte</b>	<b>Method</b>
Orthophosphate	Lachat 10-115-01-1-A
pH	SM 4500-H-B
Phenolics, Total	EPA 420.4
Phenolics, Total	Lachat 10-210-00-1-B
Phosphorus, Total	Lachat 10-115-01-1-C
Phosphorus, Total	SM 4500-P-B,E
Polychlorinated Biphenyls (Oil)	EPA 600/4-81-045
Polychlorinated Biphenyls (Water)	EPA 608
Potassium	EPA 200.7
Selenium	EPA 200.7
Selenium	EPA 200.8
Silver	EPA 200.7
Sodium	EPA 200.7
Specific Conductivity	SM 2510-B
Strontium	EPA 200.7
Sulfate	EPA 300.0
SVOC-Acid Extractables	EPA 625
SVOC-Base/Neutral Extractables	EPA 625
Thallium	EPA 200.7
Thallium	EPA 200.8
Titanium	EPA 200.7
Total Dissolved Solids	SM 2540-C
Total Organic Carbon	SM 5310-B
Toxaphene	EPA 608
Vanadium	EPA 200.7
Vanadium	EPA 200.8
Volatile Aromatics	EPA 602
Volatile Aromatics	EPA 624
Volatile Halocarbons	EPA 624
Zinc	EPA 200.7
Zinc	EPA 200.8

July 19, 2011

Ms. Cindy Campisano  
Environmental Health & Engineering, Inc.  
117 Fourth Avenue  
Needham, MA 02494

## **LABORATORY REPORT**

Project:           **17228**  
Lab ID:           **143394**  
Received:         **07-14-11**

Dear Cindy:

Enclosed are the analytical results for the above referenced project. The project was processed for Rush 48 Hour turnaround.

This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. The analytical results relate only to the samples received. This report may only be used or reproduced in its entirety.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Karyn E. Raymond  
Project Manager

KER/ker

## Sample Receipt Report

Project: **17228**  
Client: **Environmental Health & Engineering, Inc.**  
Lab ID: **143394**

Delivery: **Hand**  
Airbill: **n/a**  
Lab Receipt: **07-14-11**

Temperature: **5.7°C**  
Chain of Custody: **Present**  
Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-1	125376-SF17		Soil	7/13/11 12:10	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028751	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-2	125377-SF19A		Soil	7/13/11 12:19	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028760	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-3	125378-SF19B		Soil	7/13/11 12:32	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028767	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-4	125379-SF21A		Soil	7/13/11 12:44	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028768	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-5	125380-SF21B		Soil	7/13/11 12:34	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028759	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-6	125381-SF22A		Soil	7/13/11 13:23	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028753	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-7	125382-SF22A-D		Soil	7/13/11 13:23	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028740	120 mL Amber Glass	Proline	BX39299	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-8	125383-SF22B		Soil	7/13/11 13:25	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028758	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-9	125384-SF22B-MS		Soil	7/13/11 13:25	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028739	120 mL Amber Glass	Proline	BX39299	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-10	125386-SF23A		Soil	7/13/11 13:45	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028761	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-11	125387-SF23B		Soil	7/13/11 13:39	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028766	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

## Sample Receipt Report (Continued)

Project: <b>17228</b>	Delivery: <b>Hand</b>	Temperature: <b>5.7°C</b>
Client: <b>Environmental Health &amp; Engineering, Inc.</b>	Airbill: <b>n/a</b>	Chain of Custody: <b>Present</b>
Lab ID: <b>143394</b>	Lab Receipt: <b>07-14-11</b>	Custody Seal(s): <b>n/a</b>

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-12	125388-SF7A		Soil	7/13/11 14:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028752	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-13	125385-SF22B-MSD		Soil	7/13/11 13:25	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028741	120 mL Amber Glass	Proline	BX39299	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-14	125389-SF7B		Soil	7/13/11 13:52	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028750	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-15	125390-SF33A		Soil	7/13/11 14:18	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028769	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-16	125391-SF33B		Soil	7/13/11 14:20	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028749	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-17	125392-SF53A		Soil	7/13/11 14:43	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028762	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-18	125393-SF53B		Soil	7/13/11 14:48	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028765	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-19	125394-SF53A-MS		Soil	7/13/11 14:43	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028743	120 mL Amber Glass	Proline	BX39299	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-20	125395-SF53A-MSD		Soil	7/13/11 14:43	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028744	120 mL Amber Glass	Proline	BX39299	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-21	125396-SF53B-D		Soil	7/13/11 14:48	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028742	120 mL Amber Glass	Proline	BX39299	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-22	125397-SF36		Soil	7/13/11 15:25	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028754	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

**Sample Receipt Report (Continued)**

Project: **17228** Delivery: **Hand** Temperature: **5.7°C**  
 Client: **Environmental Health & Engineering, Inc.** Airbill: **n/a** Chain of Custody: **Present**  
 Lab ID: **143394** Lab Receipt: **07-14-11** Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143394-23	125398-SF38		Soil	7/13/11 15:36	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028757	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		

## Data Certification

Project: #####  
Client: Environmental Health & Engineering, Inc.

Lab ID: 143394  
Received: 07-14-11 10:50

Mass DEP Analytical Protocol Certification Form					
Project Location: n/a		MA DEP RTN: n/a			
<b>This Form provides certifications for the following data set:</b>					
EPA 8082: 143394-1,-2,-3,-4,-5,-6,-7,-8,-9,-10,-11,-12,-13,-14,-15,-16,-17,-18,-19,-20,-21,-22,-23					
Sample Matrices: Groundwater/Surface ( ) Soil/Sediment (X) Drinking Water ( ) Air ( ) Other ( )					
<b>CAM Protocol</b> (check all that apply below):					
8260 VOC CAM II A ( )	7470/7471 Hg CAM III B ( )	Mass DEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	Mass DEP APH CAM IX A ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	Mass DEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D ( )	8082 PCB CAM V A (X)	9012 Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	
<b>An affirmative response to questions A through F are required for "Presumptive Certainty" status.</b>					
A.	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				Yes
B.	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				Yes
C.	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				Yes
D.	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				Yes
E.	<u>VPH, EPH and APH methods only:</u> Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).				n/a
F.	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?				Yes
<b>Responses to questions G, H and I below are required for "Presumptive Certainty" status.</b>					
G.	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				No
<b>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.</b>					
H.	Were all QC performance standards specified in the CAM protocol(s) achieved?				NO
I.	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes
<b>All negative responses must be addressed in an attached laboratory narrative.</b>					
<b>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</b>					
Signature: <i>Karyn E. Raymond</i>		Position: Project Manager			
Printed Name: Karyn E. Raymond		Date: 07-19-11			

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125376-SF17**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-01**  
 Sampled: **07-13-11 12:10**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 03:53**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **74**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	54
11104-28-2	Aroclor 1221	BRL		ug/Kg	54
11141-16-5	Aroclor 1232	BRL		ug/Kg	54
53469-21-9	Aroclor 1242	BRL		ug/Kg	54
12672-29-6	Aroclor 1248	BRL		ug/Kg	54
11097-69-1	Aroclor 1254	<b>140</b>	2C (130)*	ug/Kg	54
11096-82-5	Aroclor 1260	BRL		ug/Kg	54
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	54
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	54

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	9	8	<b>85</b> %	30 - 150 %
	Decachlorobiphenyl	9	6	<b>70</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	9	10	<b>109</b> %	30 - 150 %
	Decachlorobiphenyl	9	7	<b>75</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125377-SF19A**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-02**  
 Sampled: **07-13-11 12:19**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 04:17**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **77**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	52
11104-28-2	Aroclor 1221	BRL		ug/Kg	52
11141-16-5	Aroclor 1232	BRL		ug/Kg	52
53469-21-9	Aroclor 1242	BRL		ug/Kg	52
12672-29-6	Aroclor 1248	BRL		ug/Kg	52
11097-69-1	Aroclor 1254	74	1C (59)*	ug/Kg	52
11096-82-5	Aroclor 1260	BRL		ug/Kg	52
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	52
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	52

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	9	8	94 %	30 - 150 %
	Decachlorobiphenyl	9	6	65 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	9	9	104 %	30 - 150 %
	Decachlorobiphenyl	9	6	69 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125378-SF19B**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-03**  
 Sampled: **07-13-11 12:32**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 04:41**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **88**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	BRL		ug/Kg	45
11097-69-1	Aroclor 1254	250	1C (220)*	ug/Kg	45
11096-82-5	Aroclor 1260	BRL		ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	81 %	30 - 150 %
	Decachlorobiphenyl	8	5	70 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	7	94 %	30 - 150 %
	Decachlorobiphenyl	8	5	71 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125379-SF21A**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-04**  
 Sampled: **07-13-11 12:44**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 05:04**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **87**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	BRL		ug/Kg	45
11097-69-1	Aroclor 1254	BRL		ug/Kg	45
11096-82-5	Aroclor 1260	BRL		ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>74</b> %	30 - 150 %
	Decachlorobiphenyl	8	4	<b>53</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>82</b> %	30 - 150 %
	Decachlorobiphenyl	8	4	<b>55</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125380-SF21B**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-05**  
 Sampled: **07-13-11 12:34**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 05:28**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **95**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	BRL		ug/Kg	42
11097-69-1	Aroclor 1254	63	1C (60)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	67 %	30 - 150 %
	Decachlorobiphenyl	7	4	58 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	71 %	30 - 150 %
	Decachlorobiphenyl	7	4	58 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125381-SF22A**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-06**  
 Sampled: **07-13-11 13:23**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 05:51**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **87**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	BRL		ug/Kg	45
11097-69-1	Aroclor 1254	BRL		ug/Kg	45
11096-82-5	Aroclor 1260	BRL		ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	7	<b>91</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>69</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	7	<b>96</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>65</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125382-SF22A-D**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-07**  
 Sampled: **07-13-11 13:23**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 06:15**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **86**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	46
11104-28-2	Aroclor 1221	BRL		ug/Kg	46
11141-16-5	Aroclor 1232	BRL		ug/Kg	46
53469-21-9	Aroclor 1242	BRL		ug/Kg	46
12672-29-6	Aroclor 1248	BRL		ug/Kg	46
11097-69-1	Aroclor 1254	BRL		ug/Kg	46
11096-82-5	Aroclor 1260	BRL		ug/Kg	46
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	46
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	46

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>76</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>64</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>84</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>63</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125383-SF22B**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-08**  
 Sampled: **07-13-11 13:25**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 07:49**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **95**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	<b>920</b> e	2C (610)*	ug/Kg	42
11097-69-1	Aroclor 1254	<b>520</b> e	1C (410)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	7	7	<b>95</b> %
Column	Decachlorobiphenyl	7	5	<b>74</b> %
Second	Tetrachloro- <i>m</i> -xylene	7	7	<b>104</b> %
Column	Decachlorobiphenyl	7	5	<b>73</b> %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.  
 2C Concentration reported from second column.  
 e Indicates concentration exceeded calibration range for the analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125383-SF22B**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-08RA1**  
 Sampled: **07-13-11 13:25**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-18-11 10:49**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **95**  
 Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	210
11104-28-2	Aroclor 1221	BRL		ug/Kg	210
11141-16-5	Aroclor 1232	BRL		ug/Kg	210
53469-21-9	Aroclor 1242	BRL		ug/Kg	210
12672-29-6	Aroclor 1248	<b>1000</b>	2C (630)*	ug/Kg	210
11097-69-1	Aroclor 1254	<b>430</b>	2C (420)*	ug/Kg	210
11096-82-5	Aroclor 1260	BRL		ug/Kg	210
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	210
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	210

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>96</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>74</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	8	<b>111</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>72</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.



## Matrix Spike and Matrix Spike Duplicate EPA Method 8082

Field ID:	12583-SF-22B	Laboratory ID:	Parent Sample	Matrix Spike	Spike Duplicate
Project:	17228		143394-8	143394-9	143394-13
Client:	Environmental Health & Engineering	Sampled:	07-13-11 13:25	07-13-11 13:25	07-13-11 13:25
Matrix:	Soil	Received:	07-14-11 10:50	07-14-11 10:50	07-14-11 10:50
Container:	250 mL Glass	Extracted:	07-14-11 21:00	07-14-11 21:00	07-14-11 21:00
Preservation:	Cool	Cleaned Up:	07-15-11 22:00	07-15-11 22:00	07-15-11 22:00
		Analyzed:	07-16-11 07:49	07-16-11 08:13	07-16-11 08:37
		Analyst:	CRL	CRL	CRL
		QC Batch ID:	PB-3770-X	PB-3770-X	PB-3770-X
		Instrument ID:	GC-13 HP 6890	GC-6 HP 5890	GC-6 HP 5890
		Sample Weight:	30g	30g	30g
		Final Volume:	1 mL	1 mL	1 mL
		Percent Solids:	95	94	95
		Dilution Factor:	1	1	1

CAS Number	Analyte	Unspiked Sample (ug/Kg)	MS Spiked (ug/Kg)	MS Measured		MS Recovery		MSD Spiked (ug/Kg)	MSD Measured		MSD Recovery		RPD		QC Lim
				1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	
12674-11-2	Aroclor 1016	BRL	170	360	370	210 % s	214 % s	170	420	400	248 % s	234 % s	16 %	8 %	40 - 140%
11096-82-5	Aroclor 1260	BRL	170	250	380	147 % s	219 % s	170	270	390	157 % s	229 % s	6 %	3 %	40 - 140%

QC Surrogate Compound	Surrogate Recovery													QC Lim
Tetrachloro- <i>m</i> -xylene	96%	7	6	7	81%	97%	7	7	6	99%	93%			30 - 150
Decachlorobiphenyl	74%	7	4	5	63%	67%	7	5	5	67%	68%			30 - 150

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3545. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
s Recovery outside recommended limits due to high concentration of analyte native to sample.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125386-SF23A**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-10**  
 Sampled: **07-13-11 13:45**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 09:00**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **88**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	45
11104-28-2	Aroclor 1221	BRL		ug/Kg	45
11141-16-5	Aroclor 1232	BRL		ug/Kg	45
53469-21-9	Aroclor 1242	BRL		ug/Kg	45
12672-29-6	Aroclor 1248	BRL		ug/Kg	45
11097-69-1	Aroclor 1254	<b>70</b>	1C (53)*	ug/Kg	45
11096-82-5	Aroclor 1260	BRL		ug/Kg	45
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	45
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	45

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	8	<b>101</b> %	30 - 150 %
	Decachlorobiphenyl	8	6	<b>73</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	8	<b>108</b> %	30 - 150 %
	Decachlorobiphenyl	8	6	<b>73</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

## EPA Method 8082 Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID: **125387-SF23B**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-11**  
 Sampled: **07-13-11 13:39**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 09:24**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **96**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	300	2C (270)*	ug/Kg	41
11097-69-1	Aroclor 1254	220	1C (170)*	ug/Kg	41
11096-82-5	Aroclor 1260	BRL		ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	7	6	81 %
Column	Decachlorobiphenyl	7	5	68 %
Second	Tetrachloro- <i>m</i> -xylene	7	6	89 %
Column	Decachlorobiphenyl	7	5	73 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125388-SF7A**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-12**  
 Sampled: **07-13-11 14:00**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 09:48**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **95**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	97	1C (80)*	ug/Kg	41
11096-82-5	Aroclor 1260	BRL		ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	89 %	30 - 150 %
	Decachlorobiphenyl	7	5	74 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	95 %	30 - 150 %
	Decachlorobiphenyl	7	5	73 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125389-SF7B**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-14**  
 Sampled: **07-13-11 13:52**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 10:11**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **98**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	<b>100</b>	1C (75)*	ug/Kg	41
11096-82-5	Aroclor 1260	BRL		ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>81</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>74</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>92</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>75</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

\* Confirmatory column quantification.

1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125390-SF33A**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-15**  
 Sampled: **07-13-11 14:18**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 10:35**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **84**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	47
11104-28-2	Aroclor 1221	BRL		ug/Kg	47
11141-16-5	Aroclor 1232	BRL		ug/Kg	47
53469-21-9	Aroclor 1242	BRL		ug/Kg	47
12672-29-6	Aroclor 1248	BRL		ug/Kg	47
11097-69-1	Aroclor 1254	<b>1700</b>	e 2C (1400)*	ug/Kg	47
11096-82-5	Aroclor 1260	BRL		ug/Kg	47
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	47
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	47

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	6	<b>78</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>60</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	7	<b>84</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>62</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.  
 e Indicates concentration exceeded calibration range for the analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125390-SF33A**  
Project: **17228**  
Client: **Environmental Health & Engineering, Inc.**  
  
Laboratory ID: **143394-15RA1**  
Sampled: **07-13-11 14:18**  
Received: **07-14-11 10:50**  
Extracted: **07-14-11 21:00**  
Cleaned Up: **07-15-11 22:00**  
Analyzed: **07-18-11 11:12**  
Analyst: **CRL**

Matrix: **Soil**  
Container: **120 mL Amber Glass**  
Preservation: **Cool**  
  
QC Batch ID: **PB-3770-X**  
Instrument ID: **GC-13 Agilent 6890**  
Sample Weight: **30 g**  
Final Volume: **1 mL**  
Percent Solids: **84**  
Dilution Factor: **10**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	470
11104-28-2	Aroclor 1221	BRL		ug/Kg	470
11141-16-5	Aroclor 1232	BRL		ug/Kg	470
53469-21-9	Aroclor 1242	BRL		ug/Kg	470
12672-29-6	Aroclor 1248	BRL		ug/Kg	470
11097-69-1	Aroclor 1254	<b>1400</b>	2C (1300)*	ug/Kg	470
11096-82-5	Aroclor 1260	BRL		ug/Kg	470
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	470
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	470

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	8	7	<b>93</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>57</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	8	8	<b>102</b> %	30 - 150 %
	Decachlorobiphenyl	8	5	<b>60</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
† Non-target analyte. Result is based on a single mid-range calibration standard.  
\* Confirmatory column quantification.  
2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125391-SF33B**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-16**  
 Sampled: **07-13-11 14:20**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 10:59**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **93**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	42
11104-28-2	Aroclor 1221	BRL		ug/Kg	42
11141-16-5	Aroclor 1232	BRL		ug/Kg	42
53469-21-9	Aroclor 1242	BRL		ug/Kg	42
12672-29-6	Aroclor 1248	BRL		ug/Kg	42
11097-69-1	Aroclor 1254	<b>920</b>	e 2C (830)*	ug/Kg	42
11096-82-5	Aroclor 1260	BRL		ug/Kg	42
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	42
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	42

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>79</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>69</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>88</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>76</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.  
 e Indicates concentration exceeded calibration range for the analyte.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125391-SF33B**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-16RA1**  
 Sampled: **07-13-11 14:20**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-18-11 11:36**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **93**  
 Dilution Factor: **5**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	210
11104-28-2	Aroclor 1221	BRL		ug/Kg	210
11141-16-5	Aroclor 1232	BRL		ug/Kg	210
53469-21-9	Aroclor 1242	BRL		ug/Kg	210
12672-29-6	Aroclor 1248	BRL		ug/Kg	210
11097-69-1	Aroclor 1254	<b>900</b>	2C (850)*	ug/Kg	210
11096-82-5	Aroclor 1260	BRL		ug/Kg	210
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	210
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	210

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>94</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>68</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>103</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>71</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125392-SF53A**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-17**  
 Sampled: **07-13-11 14:43**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:30**  
 Cleaned Up: **07-15-11 20:00**  
 Analyzed: **07-16-11 14:32**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3771-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **97**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	<b>100</b>	1C (95)*	ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>94</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>59</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>104</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>66</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

## Matrix Spike and Matrix Spike Duplicate EPA Method 8082

Field ID:	12583-SF-53A	Laboratory ID:	Parent Sample	Matrix Spike	Spike Duplicate
Project:	17228		143394-17	143394-19	143394-20
Client:	Environmental Health & Engineering	Sampled:	07-13-11 14:48	07-13-11 13:25	07-13-11 13:25
Matrix:	Soil	Received:	07-14-11 10:50	07-14-11 10:50	07-14-11 10:50
Container:	250 mL Glass	Extracted:	07-14-11 21:00	07-14-11 21:00	07-14-11 21:00
Preservation:	Cool	Cleaned Up:	07-15-11 22:00	07-15-11 22:00	07-15-11 22:00
		Analyzed:	07-16-11 14:32	07-16-11 15:19	07-16-11 15:43
		Analyst:	CRL	CRL	CRL
		QC Batch ID:	PB-3770-X	PB-3770-X	PB-3770-X
		Instrument ID:	GC-13 HP 6890	GC-6 HP 5890	GC-6 HP 5890
		Sample Weight:	30g	30g	30g
		Final Volume:	1 mL	1 mL	1 mL
		Percent Solids:	98	94	95
		Dilution Factor:	1	1	1

CAS Number	Analyte	Unspiked Sample (ug/Kg)	MS Spiked (ug/Kg)	MS Measured		MS Recovery		MSD Spiked (ug/Kg)	MSD Measured		MSD Recovery		RPD		QC Lim
				1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	
12674-11-2	Aroclor 1016	BRL	170	210	210	120 %	124 %	170	170	190	101 %	109 %	18 %	13 %	40 - 140 %
11096-82-5	Aroclor 1260	BRL	170	240	300	137 %	176 % q	170	200	270	119 %	157 % q	15 %	12 %	40 - 140 %

QC Surrogate Compound	Surrogate Recovery													QC Lim
Tetrachloro- <i>m</i> -xylene	94%	7	7	8	107%	116%	7	6	7	84%	97%			30 - 150
Decachlorobiphenyl	59%	7	4	5	61%	71%	7	3	4	50%	58%			30 - 150

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3545. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
q Recovery outside recommended limits.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125393-SF53B**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-18**  
 Sampled: **07-13-11 14:48**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:30**  
 Cleaned Up: **07-15-11 20:00**  
 Analyzed: **07-16-11 14:55**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3771-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **98**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	41
11104-28-2	Aroclor 1221	BRL		ug/Kg	41
11141-16-5	Aroclor 1232	BRL		ug/Kg	41
53469-21-9	Aroclor 1242	BRL		ug/Kg	41
12672-29-6	Aroclor 1248	BRL		ug/Kg	41
11097-69-1	Aroclor 1254	BRL		ug/Kg	41
11096-82-5	Aroclor 1260	BRL		ug/Kg	41
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	41
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	41

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>89</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>57</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>99</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>63</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125396-SF53B-D**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-21**  
 Sampled: **07-13-11 14:48**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:30**  
 Cleaned Up: **07-15-11 20:00**  
 Analyzed: **07-16-11 16:06**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3771-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **98**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>92</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>59</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	7	<b>104</b> %	30 - 150 %
	Decachlorobiphenyl	7	5	<b>67</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125397-SF36**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-22**  
 Sampled: **07-13-11 15:25**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 11:22**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **74**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	53
11104-28-2	Aroclor 1221	BRL		ug/Kg	53
11141-16-5	Aroclor 1232	BRL		ug/Kg	53
53469-21-9	Aroclor 1242	BRL		ug/Kg	53
12672-29-6	Aroclor 1248	BRL		ug/Kg	53
11097-69-1	Aroclor 1254	<b>270</b>	1C (270)*	ug/Kg	53
11096-82-5	Aroclor 1260	BRL		ug/Kg	53
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	53
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	53

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	9	7	<b>81</b> %	30 - 150 %
	Decachlorobiphenyl	9	6	<b>73</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	9	8	<b>96</b> %	30 - 150 %
	Decachlorobiphenyl	9	7	<b>80</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125398-SF38**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-23**  
 Sampled: **07-13-11 15:36**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-16-11 11:46**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **64**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	63
11104-28-2	Aroclor 1221	BRL		ug/Kg	63
11141-16-5	Aroclor 1232	BRL		ug/Kg	63
53469-21-9	Aroclor 1242	BRL		ug/Kg	63
12672-29-6	Aroclor 1248	BRL		ug/Kg	63
11097-69-1	Aroclor 1254	<b>430</b>	e 1C (410)*	ug/Kg	63
11096-82-5	Aroclor 1260	BRL		ug/Kg	63
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	63
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	63

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	10	7	<b>66</b> %	30 - 150 %
	Decachlorobiphenyl	10	7	<b>70</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	10	10	<b>91</b> %	30 - 150 %
	Decachlorobiphenyl	10	7	<b>69</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.  
 e Indicates concentration exceeded calibration range for the analyte.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125398-SF38**  
 Project: **17228**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143394-23RA1**  
 Sampled: **07-13-11 15:36**  
 Received: **07-14-11 10:50**  
 Extracted: **07-14-11 21:00**  
 Cleaned Up: **07-15-11 22:00**  
 Analyzed: **07-18-11 13:20**  
 Analyst: **CRL**

Matrix: **Soil**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3770-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **64**  
 Dilution Factor: **2**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	130
11104-28-2	Aroclor 1221	BRL		ug/Kg	130
11141-16-5	Aroclor 1232	BRL		ug/Kg	130
53469-21-9	Aroclor 1242	BRL		ug/Kg	130
12672-29-6	Aroclor 1248	BRL		ug/Kg	130
11097-69-1	Aroclor 1254	<b>430</b>	2C (420)*	ug/Kg	130
11096-82-5	Aroclor 1260	BRL		ug/Kg	130
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	130
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	130

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	10	10	<b>94</b> %	30 - 150 %
	Decachlorobiphenyl	10	8	<b>73</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	10	10	<b>100</b> %	30 - 150 %
	Decachlorobiphenyl	10	7	<b>66</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.  
 Results are reported on a dry weight basis.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 2C Concentration reported from second column.



## Project Narrative

Project: **17228**  
Client: **Environmental Health & Engineering, Inc.**

Lab ID: **143394**  
Received: **07-14-11 10:50**

### A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

- 1 . No documentation discrepancies, changes, or amendments were noted.

### B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

- 1 . EPA 8082 Non-conformance: Samples 143394-08, -15, -16, -23. Reported results for selected analyte exceeded the high standard of the associated calibration curve. Results are estimated. Sample was reanalyzed and reported with all analytes within calibration.
- 2 . EPA 8082 Note: Samples 143394-08,- 15, -16, -23. Sample were diluted prior to analysis. Dilution was required to keep all target analytes within calibration.
- 3 . EPA 8082 Non-conformance: Sample 143394-8. Matrix spike recovery was above recommend limits due to high concentration of analyte native to the sample.
- 4 . EPA 8082 Note: Sample 143394-17. Matrix spike recovery was above recommend limits on the second column. Recovery was within criteria on the primary column.

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Buzzards Bay, MA 02532  
Telephone (508) 759-4441 • FAX (508) 759-4475  
[www.groundwateranalytical.com](http://www.groundwateranalytical.com)

Project Name: —	Firm: EH+E
Project Number: 17228	Address: 117 4th Ave
Sampler Name: EHT, ASB	City / State / Zip: Needham, MA 02494
Project Manager: CDC	Telephone: 181 247 4300

☐ STANDARD (10 Business Days)  
☐ PRIORITY (5 Business Days)  
☒ RUSH (RAN- by Mon 7/18/11)  
 (Rush requires Rush Authorization Number)

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## REMARKS / SPECIAL INSTRUCTIONS

Regulatory Program		
State	Standard	Deliverables
<input type="checkbox"/> CT	<input type="checkbox"/> MCP GW-1/S-1	<input type="checkbox"/> PWS Form
<input type="checkbox"/> ME	<input type="checkbox"/> MCP GW-2/S-2	<input type="checkbox"/> MWRA
<input type="checkbox"/> MA	<input type="checkbox"/> NY STARS	<input type="checkbox"/> _____
<input type="checkbox"/> NH	<input type="checkbox"/> Drinking Water	
<input type="checkbox"/> NY	<input type="checkbox"/> Wastewater	
<input type="checkbox"/> RI	<input type="checkbox"/> Waste Disposal	
<input type="checkbox"/> VT	<input type="checkbox"/> Dredge Material	
<input type="checkbox"/> _____	<input type="checkbox"/> _____	

Many regulatory programs and EPA methods require project specific QC. Project specific QC includes Sample Duplicates, Matrix Spikes, and/or Matrix Spike Duplicates. Laboratory QC is not project specific unless prearranged. Project specific QC samples are charged on a per sample basis. **Each MS, MSD and Sample Duplicate requires an additional sample aliquot.**

NOTE: All samples submitted subject to Standard Terms and Conditions on reverse hereof.			
Relinquished by Sampler: <i>AMS B2D</i>	Date <i>14 JUL 11</i>	Time <i>1050</i>	Received by: <i>[Signature]</i>
			Receipt Temperature: <input checked="" type="checkbox"/> Ice <input type="checkbox"/> Refrigerated 2-4°C Recommended <i>5.7°C</i>
Relinquished by:	Date	Time	Received by:
			Container Count:
Relinquished by:	Date	Time	Received by Laboratory:
			Shipping/Airbill Number:
Method of Shipment: <input type="checkbox"/> GWA Courier <input type="checkbox"/> Express Mail <input type="checkbox"/> Federal Express <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/>			Custody Seal Number:

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[www.groundwateranalytical.com](http://www.groundwateranalytical.com)

<b>TURNAROUND</b>	
<input type="checkbox"/>	STANDARD (10 Business Days)
<input type="checkbox"/>	PRIORITY (5 Business Days)
<input checked="" type="checkbox"/> RUSH (RAN- <i>by Mon 7/18/11</i> ) (Rush requires Rush Authorization Number)	
<input checked="" type="checkbox"/>	Please Email to: <i>ccampisano@ehcinc.com</i>
<input type="checkbox"/>	Please FAX to:
<b>BILLING</b>	
<input checked="" type="checkbox"/>	Purchase Order No.: <i>1002033</i>
<input type="checkbox"/>	Third Party Billing:
<input type="checkbox"/>	GWA Quote:

[illegible]Page 33 of 41

## Quality Assurance/Quality Control

### A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*, US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste*, US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

### B. Definitions

**Batches** are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

**Laboratory Control Samples** are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

**Method Blanks** are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

**Surrogate Compounds** are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.



## Quality Control Report Laboratory Control Samples

Category:	<b>EPA 8082</b>	LCS	Instrument ID:	<b>GC-13 Agilent 6890</b>	LCSD	Instrument ID:	<b>GC-13 Agilent 6890</b>
QC Batch ID:	<b>PB-3770-X</b>		Extracted:	<b>07-14-11 21:00</b>		Extracted:	<b>07-14-11 21:00</b>
Matrix:	<b>Soil</b>		Cleaned Up:	<b>07-15-11 22:00</b>		Cleaned Up:	<b>07-15-11 22:00</b>
Units:	<b>ug/Kg</b>		Analyzed:	<b>07-16-11 03:06</b>		Analyzed:	<b>07-16-11 03:30</b>
			Analyst:	<b>CRL</b>		Analyst:	<b>CRL</b>

CAS Number	Analyte	LCS					LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD				
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD	
12674-11-2	Aroclor 1016	170	170	170	102%	101%	170	170	170	102%	104%	0 %	2 %	40 - 140%	30 %	
11096-82-5	Aroclor 1260	170	170	180	103%	105%	170	170	180	103%	107%	0 %	2 %	40 - 140%	30 %	
QC Surrogate Compound		Surrogate Recovery												QC Limits		
Tetrachloro- <i>m</i> -xylene		6.7	6.7	6.6	101%	100%	6.7	6.5	6.5	98%	98%			30 - 150 %		
Decachlorobiphenyl		6.7	4.7	4.7	70%	71%	6.7	4.6	4.7	70%	71%			30 - 150 %		

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

## Quality Control Report Method Blank

Category: **EPA Method 8082**  
QC Batch ID: **PB-3770-X**  
Matrix: **Soil**

Instrument ID: **GC-13 Agilent 6890**  
Extracted: **07-14-11 21:00**  
Cleaned Up: **07-15-11 22:00**  
Analyzed: **07-16-11 02:43**  
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	6.7	6.5	<b>98</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	4.3	<b>65</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	6.7	6.6	<b>100</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	4.6	<b>69</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.

## Quality Control Report Laboratory Control Samples

Category: <b>EPA 8082</b> QC Batch ID: <b>PB-3771-X</b> Matrix: <b>Soil</b> Units: <b>ug/Kg</b>	<b>LCS</b> Instrument ID: <b>GC-13 Agilent 6890</b> Extracted: <b>07-14-11 21:30</b> Cleaned Up: <b>07-15-11 20:00</b> Analyzed: <b>07-16-11 13:44</b> Analyst: <b>CRL</b>	<b>LCSD</b> Instrument ID: <b>GC-13 Agilent 6890</b> Extracted: <b>07-14-11 21:30</b> Cleaned Up: <b>07-15-11 20:00</b> Analyzed: <b>07-16-11 14:08</b> Analyst: <b>CRL</b>
--	---	--

CAS Number	Analyte	LCS					LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD				
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD	
12674-11-2	Aroclor 1016	170	190	180	115%	110%	170	200	180	118%	106%	2 %	3 %	40 - 140%	30 %	
11096-82-5	Aroclor 1260	170	180	180	107%	109%	170	180	180	108%	110%	1 %	1 %	40 - 140%	30 %	
QC Surrogate Compound		Surrogate Recovery												QC Limits		
Tetrachloro- <i>m</i> -xylene		6.7	6.9	6.7	103%	101%	6.7	6.9	6.7	103%	101%			30 - 150 %		
Decachlorobiphenyl		6.7	4.4	4.5	66%	68%	6.7	4.5	4.6	67%	69%			30 - 150 %		

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** All calculations performed prior to rounding. Quality Control Limits are defined by the methodology,  
 or alternatively based upon the historical average recovery plus or minus three standard deviation units.

## Quality Control Report Method Blank

Category: **EPA Method 8082**  
QC Batch ID: **PB-3771-X**  
Matrix: **Soil**

Instrument ID: **GC-13 Agilent 6890**  
Extracted: **07-14-11 21:30**  
Cleaned Up: **07-15-11 20:00**  
Analyzed: **07-16-11 13:20**  
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	6.7	6.5	<b>98</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	4	<b>60</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	6.7	6.5	<b>98</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	4.2	<b>64</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.



## Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states. Copies of our current certificates may be obtained from our website:

<http://www.groundwateranalytical.com/qualifications.htm>

### CONNECTICUT

**Department of Health Services, PH-0586**

Potable Water, Wastewater, Solid Waste and Soil

[http://www.ct.gov/dph/lib/dph/environmental\\_health/environmental\\_laboratories/pdf/Out\\_State.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/Out_State.pdf)

### MASSACHUSETTS

**Department of Environmental Protection, M-MA-103**

Potable Water and Non-Potable Water

<http://public.dep.state.ma.us/labcert/labcert.aspx>

**Department of Labor,**

Asbestos Analytical Services, Class A

**Division of Occupational Safety, AA000195**

[http://www.mass.gov/dos/forms/la-rpt\\_list\\_aa.pdf](http://www.mass.gov/dos/forms/la-rpt_list_aa.pdf)

### NEW HAMPSHIRE

**Department of Environmental Services, 202708**

Potable Water, Non-Potable Water, Solid and Chemical Materials

<http://www4.egov.nh.gov/DES/NHELAP>

### NEW YORK

**Department of Health, 11754**

Potable Water, Non-Potable Water, Solid and Hazardous Waste

<http://www.wadsworth.org/labcert/elap/comm.html>

### RHODE ISLAND

**Department of Health,**

Potable and Non-Potable Water Microbiology, Organic and Inorganic Chemistry

**Division of Laboratories, LAO00054**

<http://www.health.ri.gov/labs/outofstatelabs.pdf>

### U.S. DEPARTMENT OF AGRICULTURE

**USDA, Soil Permit, S-53921**

Foreign soil import permit

### VERMONT

**Department of Health, VT-87643**

Potable Water

[http://healthvermont.gov/enviro/ph\\_lab/water\\_test.aspx#cert](http://healthvermont.gov/enviro/ph_lab/water_test.aspx#cert)

## Certifications and Approvals

**MASSACHUSETTS**
**Department of Environmental Protection, M-MA-103**

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

**Potable Water (Drinking Water)**

Analyte	Method
1,2-Dibromo-3-Chloropropane	EPA 504.1
1,2-Dibromoethane	EPA 504.1
Alkalinity, Total	SM 2320-B
Antimony	EPA 200.8
Arsenic	EPA 200.8
Barium	EPA 200.7
Barium	EPA 200.8
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chlorine, Residual Free	SM 4500-CL-G
Chromium	EPA 200.7
Copper	EPA 200.7
Copper	EPA 200.8
Cyanide, Total	Lachat 10-204-00-1-A
E. Coli (Treatment and Distribution)	Enz. Sub. SM 9223
E. Coli (Treatment and Distribution)	NA-MUG SM 9222-G
Fecal Coliform (Source Water)	MF SM 9222-D
Fluoride	EPA 300.0
Fluoride	SM 4500-F-C
Haloacetic Acids	EPA 552.2
Heterotrophic Plate Count	SM 9215-B
Lead	EPA 200.8
Mercury	EPA 245.1
Nickel	EPA 200.7
Nickel	EPA 200.8
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Nitrite-N	EPA 300.0
Nitrite-N	Lachat 10-107-04-1-C
pH	SM 4500-H-B
Selenium	EPA 200.8
Silver	EPA 200.7
Silver	EPA 200.8
Sodium	EPA 200.7
Sulfate	EPA 300.0
Thallium	EPA 200.8
Total Coliform (Treatment and Distribution)	Enz. Sub. SM 9223
Total Coliform (Treatment and Distribution)	MF SM 9222-B
Total Dissolved Solids	SM 2540-C
Trihalomethanes	EPA 524.2
Turbidity	SM 2130-B
Volatile Organic Compounds	EPA 524.2

**Non-Potable Water (Wastewater)**

Analyte	Method
Aldrin	EPA 608
Alkalinity, Total	SM 2320-B
Alpha-BHC	EPA 608
Aluminum	EPA 200.7

**Non-Potable Water (Wastewater)**

Analyte	Method
Aluminum	EPA 200.8
Ammonia-N	Lachat 10-107-06-1-B
Antimony	EPA 200.7
Antimony	EPA 200.8
Arsenic	EPA 200.7
Arsenic	EPA 200.8
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Beta-BHC	EPA 608
Biochemical Oxygen Demand	SM 5210-B
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chemical Oxygen Demand	SM 5220-D
Chlordane	EPA 608
Chloride	EPA 300.0
Chlorine, Total Residual	SM 4500-CL-G
Chromium	EPA 200.7
Chromium	EPA 200.8
Cobalt	EPA 200.7
Cobalt	EPA 200.8
Copper	EPA 200.7
Copper	EPA 200.8
Cyanide, Total	Lachat 10-204-00-1-A
DDD	EPA 608
DDE	EPA 608
DDT	EPA 608
Delta-BHC	EPA 608
Dieldrin	EPA 608
Endosulfan I	EPA 608
Endosulfan II	EPA 608
Endosulfan Sulfate	EPA 608
Endrin	EPA 608
Endrin Aldehyde	EPA 608
Gamma-BHC	EPA 608
Hardness (CaCO <sub>3</sub> ), Total	EPA 200.7
Hardness (CaCO <sub>3</sub> ), Total	SM 2340-B
Heptachlor	EPA 608
Heptachlor Epoxide	EPA 608
Iron	EPA 200.7
Kjeldahl-N	Lachat 10-107-06-02-D
Lead	EPA 200.7
Magnesium	EPA 200.7
Manganese	EPA 200.7
Manganese	EPA 200.8
Mercury	EPA 245.1
Molybdenum	EPA 200.7
Molybdenum	EPA 200.8
Nickel	EPA 200.7
Nickel	EPA 200.8
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Non-Filterable Residue	SM 2540-D
Oil and Grease	EPA 1664

## Certifications and Approvals

### MASSACHUSETTS

Department of Environmental Protection, M-MA-103

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

#### Non-Potable Water (Wastewater)

Analyte	Method
Orthophosphate	Lachat 10-115-01-1-A
pH	SM 4500-H-B
Phenolics, Total	EPA 420.4
Phenolics, Total	Lachat 10-210-00-1-B
Phosphorus, Total	Lachat 10-115-01-1-C
Phosphorus, Total	SM 4500-P-B,E
Polychlorinated Biphenyls (Oil)	EPA 600/4-81-045
Polychlorinated Biphenyls (Water)	EPA 608
Potassium	EPA 200.7
Selenium	EPA 200.7
Selenium	EPA 200.8
Silver	EPA 200.7
Sodium	EPA 200.7
Specific Conductivity	SM 2510-B
Strontium	EPA 200.7
Sulfate	EPA 300.0
SVOC-Acid Extractables	EPA 625
SVOC-Base/Neutral Extractables	EPA 625
Thallium	EPA 200.7
Thallium	EPA 200.8
Titanium	EPA 200.7
Total Dissolved Solids	SM 2540-C
Total Organic Carbon	SM 5310-B
Toxaphene	EPA 608
Vanadium	EPA 200.7
Vanadium	EPA 200.8
Volatile Aromatics	EPA 602
Volatile Aromatics	EPA 624
Volatile Halocarbons	EPA 624
Zinc	EPA 200.7
Zinc	EPA 200.8

July 21, 2011

Ms. Cindy Campisano  
Environmental Health & Engineering, Inc.  
117 Fourth Avenue  
Needham, MA 02494

## **LABORATORY REPORT**

Project: **EH&E**  
Lab ID: **143466**  
Received: **07-15-11**

Dear Cindy:

Enclosed are the analytical results for the above referenced project. The project was processed for Rush 4 Business Day turnaround.

This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. The analytical results relate only to the samples received. This report may only be used or reproduced in its entirety.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Karyn E. Raymond  
Project Manager

KER/ker

## Sample Receipt Report

Project: **EH&E**  
Client: **Environmental Health & Engineering, Inc.**  
Lab ID: **143466**

Delivery: **GWA Courier**  
Airbill: **n/a**  
Lab Receipt: **07-15-11**

Temperature: **3.4°C**  
Chain of Custody: **Present**  
Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
143466-1	125430-C-1-A		Soil	7/15/11 0:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028748	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
143466-2	125431-C-1-B		Soil	7/15/11 0:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028755	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
143466-3	125432-C-1-C		Soil	7/15/11 0:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028756	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
143466-4	125433-C-2-A		Soil	7/15/11 0:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028763	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
143466-5	125434-C-2-B		Soil	7/15/11 0:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028764	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
143466-6	125435-C-3-A		Soil	7/15/11 0:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028771	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
143466-7	125436-C-4-A		Soil	7/15/11 0:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028770	120 mL Amber Glass	Proline	BX39298	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
143466-8	125437-C-5-A		Soil	7/15/11 0:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2028746	120 mL Amber Glass	Proline	BX39299	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
143466-9	125134		Aqueous	7/15/11 0:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C2039401	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
Lab ID	Field ID		Matrix	Sampled	Method				Notes
143466-10	125135		Aqueous	7/15/11 0:00	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C1325643	1 L Amber Glass	Industrial	BX38429	None	n/a	n/a	n/a		

## Data Certification

Project: **EH&E**  
Client: **Environmental Health & Engineering, Inc.**

Lab ID: **143466**  
Received: **07-15-11 00:01**

Mass DEP Analytical Protocol Certification Form					
Project Location: <b>n/a</b>			MA DEP RTN: <b>n/a</b>		
<b>This Form provides certifications for the following data set:</b>					
EPA 8082: <b>143466-1,-2,-3,-4,-5,-6,-7,-8,-9,-10</b>					
Sample Matrices: Groundwater/Surface ( ) Soil/Sediment (X) Drinking Water ( ) Air ( ) Other (X)					
<b>CAM Protocol</b> (check all that apply below):					
8260 VOC CAM II A ( )	7470/7471 Hg CAM III B ( )	Mass DEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	Mass DEP APH CAM IX A ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	Mass DEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D ( )	8082 PCB CAM V A (X)	9012 Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	
<b>An affirmative response to questions A through F are required for "Presumptive Certainty" status.</b>					
A.	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				Yes
B.	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				Yes
C.	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				Yes
D.	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				Yes
E.	<u>VPH, EPH and APH methods only:</u> Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).				n/a
F.	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?				Yes
<b>Responses to questions G, H and I below are required for "Presumptive Certainty" status.</b>					
G.	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				Yes
<b>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.</b>					
H.	Were all QC performance standards specified in the CAM protocol(s) achieved?				No
I.	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes
<b>All negative responses must be addressed in an attached laboratory narrative.</b>					
<b>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</b>					
Signature:		Position: Project Manager			
Printed Name: Karyn E. Raymond		Date: 07-21-11			

*Karyn E. Raymond*

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125430-C-1-A**  
 Project: **EH&E**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143466-01**  
 Sampled: **07-15-11 00:00**  
 Received: **07-15-11 00:01**  
 Extracted: **07-18-11 13:45**  
 Cleaned Up: **07-19-11 13:30**  
 Analyzed: **07-19-11 18:50**  
 Analyst: **CRL**

Matrix: **Solid**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3772-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **na**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	<b>82</b>	1C (76)*	ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>76</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>61</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	5	<b>70</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>63</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125431-C-1-B**  
 Project: **EH&E**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143466-02**  
 Sampled: **07-15-11 00:00**  
 Received: **07-15-11 00:01**  
 Extracted: **07-18-11 13:45**  
 Cleaned Up: **07-19-11 13:30**  
 Analyzed: **07-19-11 19:13**  
 Analyst: **CRL**

Matrix: **Solid**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3772-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **na**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	<b>89</b>	1C (75)*	ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>90</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>63</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>90</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>63</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.



**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125432-C-1-C**  
 Project: **EH&E**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143466-03**  
 Sampled: **07-15-11 00:00**  
 Received: **07-15-11 00:01**  
 Extracted: **07-18-11 13:45**  
 Cleaned Up: **07-19-11 13:30**  
 Analyzed: **07-19-11 19:37**  
 Analyst: **CRL**

Matrix: **Solid**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3772-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **na**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	<b>110</b>	1C (88)*	ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>94</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>66</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>97</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>63</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125433-C-2-A**  
 Project: **EH&E**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143466-04**  
 Sampled: **07-15-11 00:00**  
 Received: **07-15-11 00:01**  
 Extracted: **07-18-11 13:45**  
 Cleaned Up: **07-19-11 13:30**  
 Analyzed: **07-19-11 20:01**  
 Analyst: **CRL**

Matrix: **Solid**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3772-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **na**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>86</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>63</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>88</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>65</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125434-C-2-B**  
 Project: **EH&E**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143466-05**  
 Sampled: **07-15-11 00:00**  
 Received: **07-15-11 00:01**  
 Extracted: **07-18-11 13:45**  
 Cleaned Up: **07-19-11 13:30**  
 Analyzed: **07-19-11 20:25**  
 Analyst: **CRL**

Matrix: **Solid**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3772-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **na**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>89</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>63</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>89</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>63</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125435-C-3-A**  
 Project: **EH&E**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143466-06**  
 Sampled: **07-15-11 00:00**  
 Received: **07-15-11 00:01**  
 Extracted: **07-18-11 13:45**  
 Cleaned Up: **07-19-11 13:30**  
 Analyzed: **07-19-11 20:48**  
 Analyst: **CRL**

Matrix: **Solid**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3772-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **30 g**  
 Final Volume: **1 mL**  
 Percent Solids: **na**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>87</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>63</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>89</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>64</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125436-C-4-A**  
 Project: **EH&E**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143466-07**  
 Sampled: **07-15-11 00:00**  
 Received: **07-15-11 00:01**  
 Extracted: **07-18-11 13:45**  
 Cleaned Up: **07-19-11 13:30**  
 Analyzed: **07-19-11 21:12**  
 Analyst: **CRL**

Matrix: **Solid**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3772-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **na**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	4	55 %	30 - 150 %
	Decachlorobiphenyl	7	4	61 %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	4	57 %	30 - 150 %
	Decachlorobiphenyl	7	4	61 %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125437-C-5-A**  
 Project: **EH&E**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143466-08**  
 Sampled: **07-15-11 00:00**  
 Received: **07-15-11 00:01**  
 Extracted: **07-18-11 13:45**  
 Cleaned Up: **07-19-11 13:30**  
 Analyzed: **07-19-11 23:10**  
 Analyst: **CRL**

Matrix: **Solid**  
 Container: **120 mL Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-3772-X**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **31 g**  
 Final Volume: **1 mL**  
 Percent Solids: **na**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	<b>56</b>	1C (48)*	ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 †	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 †	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>86</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>57</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	7	6	<b>87</b> %	30 - 150 %
	Decachlorobiphenyl	7	4	<b>58</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.  
 \* Confirmatory column quantification.  
 1C Concentration reported from first column.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125134**  
 Project: **EH&E**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143466-09**  
 Sampled: **07-15-11 00:00**  
 Received: **07-15-11 00:01**  
 Extracted: **07-18-11 16:30**  
 Cleaned Up: **07-18-11 20:30**  
 Analyzed: **07-19-11 14:52**  
 Analyst: **CRL**

Matrix: **Aqueous**  
 Container: **1 L Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-2708-F**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **1000 mL**  
 Final Volume: **1 mL**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.2
11104-28-2	Aroclor 1221	BRL		ug/L	0.2
11141-16-5	Aroclor 1232	BRL		ug/L	0.2
53469-21-9	Aroclor 1242	BRL		ug/L	0.2
12672-29-6	Aroclor 1248	BRL		ug/L	0.2
11097-69-1	Aroclor 1254	BRL		ug/L	0.2
11096-82-5	Aroclor 1260	BRL		ug/L	0.2
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/L	0.2
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/L	0.2

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	0.20	0.21	<b>105</b> %	30 - 150 %
Column	Decachlorobiphenyl	0.20	0.10	<b>52</b> %	30 - 150 %
Second	Tetrachloro- <i>m</i> -xylene	0.20	0.17	<b>83</b> %	30 - 150 %
Column	Decachlorobiphenyl	0.20	0.11	<b>57</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.

**EPA Method 8082  
Polychlorinated Biphenyls (PCBs) by GC/ECD**

Field ID: **125135**  
 Project: **EH&E**  
 Client: **Environmental Health & Engineering, Inc.**  
 Laboratory ID: **143466-10**  
 Sampled: **07-15-11 00:00**  
 Received: **07-15-11 00:01**  
 Extracted: **07-18-11 16:30**  
 Cleaned Up: **07-18-11 20:30**  
 Analyzed: **07-19-11 15:16**  
 Analyst: **CRL**

Matrix: **Aqueous**  
 Container: **1 L Amber Glass**  
 Preservation: **Cool**  
 QC Batch ID: **PB-2708-F**  
 Instrument ID: **GC-13 Agilent 6890**  
 Sample Weight: **1000 mL**  
 Final Volume: **1 mL**  
 Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.2
11104-28-2	Aroclor 1221	BRL		ug/L	0.2
11141-16-5	Aroclor 1232	BRL		ug/L	0.2
53469-21-9	Aroclor 1242	BRL		ug/L	0.2
12672-29-6	Aroclor 1248	BRL		ug/L	0.2
11097-69-1	Aroclor 1254	BRL		ug/L	0.2
11096-82-5	Aroclor 1260	BRL		ug/L	0.2
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/L	0.2
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/L	0.2

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	0.20	0.23	<b>115</b> %	30 - 150 %
Column	Decachlorobiphenyl	0.20	0.11	<b>55</b> %	30 - 150 %
Second	Tetrachloro- <i>m</i> -xylene	0.20	0.19	<b>93</b> %	30 - 150 %
Column	Decachlorobiphenyl	0.20	0.12	<b>58</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.



## Project Narrative

Project: **EH&E**  
Client: **Environmental Health & Engineering, Inc.**

Lab ID: **143466**  
Received: **07-15-11 00:01**

### A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

- 1 . No documentation discrepancies, changes, or amendments were noted.

### B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

- 1 . Samples 143466-1,-2,-3,-4,-5,-6,-7,-8,-9 and -10 were not received with sample collection times listed on the Chain of Custody. Samples were reported with a sampling collection time of 00:00 by the laboratory.
- 2 . EPA 8082 Non-conformance: Samples 143466-1 through -8. Laboratory control sample duplicate (LCSD) had surrogate outside of recommended limits on one column.

Environmental  
Health &  
Engineering, Inc.

# CHAIN OF CUSTODY FORM

DATE: 14 July 2011

FROM: Environmental Health and Engineering, Inc.  
117 Fourth Avenue  
Needham, MA 02494-2725

TO: GROUNDWATER ANALYTICAL

Please send invoices to ATTN: Accounts Payable  
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # \_\_\_\_\_

The cost of this analysis will be covered by EH&E Purchase Order # \_\_\_\_\_

For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
125430-C1-A	BULK	EPA 8082 - U/SOCKET EXTRACTION	
125431-C1-B			
125432-C1-C			
125433-C2-A			
125434-C2-B			
125435-C3-A			
125436-C4-A			
125437-C5-A			
<del>125438-C6-A</del>			
125134	LIQUID		
125135	LIQUID		

## Special instructions:

☒ Standard turn around time

☐ Rush by \_\_\_\_\_ date/time

☐ Other \_\_\_\_\_

☐ Fax results 781-247-4305

☒ RETURN SAMPLES

☒ Electronic transfer - datacoordinator@ehinc.com

☒ Additional report recipient

CAMPESANO@EHEINC.COM

Each signatory please return one copy of this form to the above address

Relinquished by: Oh S. B. of Environmental Health & Engineering, Inc. Date: 15 July 2011  
Received by: WCH of (company name) GWA Date: 15 July 2011  
Relinquished by: WCH of (company name) GWA Date: 15 July 2011  
Received by: WCH of (company name) GWA Date: 7/15/2011  
Relinquished by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_  
Received by: \_\_\_\_\_ of (company name) \_\_\_\_\_ Date: \_\_\_\_\_  
Lab Data  
Received by: \_\_\_\_\_ of Environmental Health & Engineering, Inc. Date: \_\_\_\_\_

10 TOTAL 129 2.4

## Quality Assurance/Quality Control

### A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*, US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste*, US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

### B. Definitions

**Batches** are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

**Laboratory Control Samples** are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

**Method Blanks** are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

**Surrogate Compounds** are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

## Quality Control Report Laboratory Control Samples

Category:	<b>EPA 8082</b>	LCS	Instrument ID:	<b>GC-13 Agilent 6890</b>	LCSD	Instrument ID:	<b>GC-13 Agilent 6890</b>
QC Batch ID:	<b>PB-3772-X</b>		Extracted:	<b>07-18-11 13:45</b>		Extracted:	<b>07-18-11 13:45</b>
Matrix:	<b>Soil</b>		Cleaned Up:	<b>07-19-11 13:30</b>		Cleaned Up:	<b>07-19-11 13:30</b>
Units:	<b>ug/Kg</b>		Analyzed:	<b>07-19-11 18:02</b>		Analyzed:	<b>07-19-11 18:26</b>
			Analyst:	<b>CRL</b>		Analyst:	<b>CRL</b>

CAS Number	Analyte	LCS					LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD				
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD	
12674-11-2	Aroclor 1016	170	170	160	104%	96%	170	210	180	127%	108%	20 %	12 %	40 - 140%	30 %	
11096-82-5	Aroclor 1260	170	150	170	90%	99%	170	160	180	99%	106%	9 %	7 %	40 - 140%	30 %	

QC Surrogate Compound	Surrogate Recovery											QC Limits	
Tetrachloro- <i>m</i> -xylene	6.7	7	6.5	106%	97%	6.7	13	6	197% q	90%		30 - 150 %	
Decachlorobiphenyl	6.7	3.8	3.9	57%	59%	6.7	3.8	4.2	57%	63%		30 - 150 %	

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.  
q Surrogate recovery outside recommended limits.

## Quality Control Report Method Blank

Category: **EPA Method 8082**  
QC Batch ID: **PB-3772-X**  
Matrix: **Soil**

Instrument ID: **GC-13 Agilent 6890**  
Extracted: **07-18-11 13:45**  
Cleaned Up: **07-19-11 13:30**  
Analyzed: **07-19-11 17:39**  
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/Kg	40
11104-28-2	Aroclor 1221	BRL		ug/Kg	40
11141-16-5	Aroclor 1232	BRL		ug/Kg	40
53469-21-9	Aroclor 1242	BRL		ug/Kg	40
12672-29-6	Aroclor 1248	BRL		ug/Kg	40
11097-69-1	Aroclor 1254	BRL		ug/Kg	40
11096-82-5	Aroclor 1260	BRL		ug/Kg	40
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/Kg	40
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	6.7	6.6	<b>100</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	3.5	<b>52</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	6.7	6.3	<b>95</b> %	30 - 150 %
	Decachlorobiphenyl	6.7	3.8	<b>57</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3540C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.

## Quality Control Report Laboratory Control Samples

Category:	<b>EPA 8082</b>	LCS	Instrument ID:	<b>GC-13 Agilent 6890</b>	LCSD	Instrument ID:	<b>GC-13 Agilent 6890</b>
QC Batch ID:	<b>PB-2708-F</b>		Extracted:	<b>07-18-11 16:30</b>		Extracted:	<b>07-18-11 16:30</b>
Matrix:	<b>Aqueous</b>		Cleaned Up:	<b>07-18-11 20:30</b>		Cleaned Up:	<b>07-18-11 20:30</b>
Units:	<b>ug/L</b>		Analyzed:	<b>07-19-11 13:17</b>		Analyzed:	<b>07-19-11 13:40</b>
			Analyst:	<b>CRL</b>		Analyst:	<b>CRL</b>

CAS Number	Analyte	LCS					LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD				
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD	
12674-11-2	Aroclor 1016	5.0	4.7	4.7	95%	95%	5.0	5.0	5.0	100%	101%	6 %	6 %	40 - 140%	20 %	
11096-82-5	Aroclor 1260	5.0	4.2	4.5	85%	90%	5.0	4.4	4.6	88%	92%	4 %	2 %	40 - 140%	20 %	

  

QC Surrogate Compound	Surrogate Recovery											QC Limits	
Tetrachloro- <i>m</i> -xylene	0.20	0.17	0.18	87%	89%	0.20	0.19	0.19	94%	93%		30 - 150 %	
Decachlorobiphenyl	0.20	0.10	0.10	49%	51%	0.20	0.10	0.11	51%	53%		30 - 150 %	

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

## Quality Control Report Method Blank

Category: **EPA Method 8082**  
QC Batch ID: **PB-2708-F**  
Matrix: **Aqueous**

Instrument ID: **GC-13 Agilent 6890**  
Extracted: **07-18-11 16:30**  
Cleaned Up: **07-18-11 20:30**  
Analyzed: **07-19-11 12:53**  
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.2
11104-28-2	Aroclor 1221	BRL		ug/L	0.2
11141-16-5	Aroclor 1232	BRL		ug/L	0.2
53469-21-9	Aroclor 1242	BRL		ug/L	0.2
12672-29-6	Aroclor 1248	BRL		ug/L	0.2
11097-69-1	Aroclor 1254	BRL		ug/L	0.2
11096-82-5	Aroclor 1260	BRL		ug/L	0.2
37324-23-5	Aroclor 1262 <sup>†</sup>	BRL		ug/L	0.2
11100-14-4	Aroclor 1268 <sup>†</sup>	BRL		ug/L	0.2

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	0.20	0.17	<b>83</b> %	30 - 150 %
	Decachlorobiphenyl	0.20	0.09	<b>45</b> %	30 - 150 %
Second Column	Tetrachloro- <i>m</i> -xylene	0.20	0.17	<b>87</b> %	30 - 150 %
	Decachlorobiphenyl	0.20	0.10	<b>47</b> %	30 - 150 %

**Method Reference:** Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

**Report Notations:** BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
<sup>†</sup> Non-target analyte. Result is based on a single mid-range calibration standard.

## Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states. Copies of our current certificates may be obtained from our website:

<http://www.groundwateranalytical.com/qualifications.htm>

### CONNECTICUT

**Department of Health Services, PH-0586**

Potable Water, Wastewater, Solid Waste and Soil

[http://www.ct.gov/dph/lib/dph/environmental\\_health/environmental\\_laboratories/pdf/Out\\_State.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/Out_State.pdf)

### MASSACHUSETTS

**Department of Environmental Protection, M-MA-103**

Potable Water and Non-Potable Water

<http://public.dep.state.ma.us/labcert/labcert.aspx>

**Department of Labor,**

Asbestos Analytical Services, Class A

**Division of Occupational Safety, AA000195**

[http://www.mass.gov/dos/forms/la-rpt\\_list\\_aa.pdf](http://www.mass.gov/dos/forms/la-rpt_list_aa.pdf)

### NEW HAMPSHIRE

**Department of Environmental Services, 202708**

Potable Water, Non-Potable Water, Solid and Chemical Materials

<http://www4.egov.nh.gov/DES/NHELAP>

### NEW YORK

**Department of Health, 11754**

Potable Water, Non-Potable Water, Solid and Hazardous Waste

<http://www.wadsworth.org/labcert/elap/comm.html>

### RHODE ISLAND

**Department of Health,**

Potable and Non-Potable Water Microbiology, Organic and Inorganic Chemistry

**Division of Laboratories, LAO00054**

<http://www.health.ri.gov/labs/outofstatelabs.pdf>

### U.S. DEPARTMENT OF AGRICULTURE

**USDA, Soil Permit, S-53921**

Foreign soil import permit

### VERMONT

**Department of Health, VT-87643**

Potable Water

[http://healthvermont.gov/enviro/ph\\_lab/water\\_test.aspx#cert](http://healthvermont.gov/enviro/ph_lab/water_test.aspx#cert)



## Certifications and Approvals

**MASSACHUSETTS**
**Department of Environmental Protection, M-MA-103**

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

**Potable Water (Drinking Water)**

Analyte	Method
1,2-Dibromo-3-Chloropropane	EPA 504.1
1,2-Dibromoethane	EPA 504.1
Alkalinity, Total	SM 2320-B
Antimony	EPA 200.8
Arsenic	EPA 200.8
Barium	EPA 200.7
Barium	EPA 200.8
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chlorine, Residual Free	SM 4500-CL-G
Chromium	EPA 200.7
Copper	EPA 200.7
Copper	EPA 200.8
Cyanide, Total	Lachat 10-204-00-1-A
E. Coli (Treatment and Distribution)	Enz. Sub. SM 9223
E. Coli (Treatment and Distribution)	NA-MUG SM 9222-G
Fecal Coliform (Source Water)	MF SM 9222-D
Fluoride	EPA 300.0
Fluoride	SM 4500-F-C
Haloacetic Acids	EPA 552.2
Heterotrophic Plate Count	SM 9215-B
Lead	EPA 200.8
Mercury	EPA 245.1
Nickel	EPA 200.7
Nickel	EPA 200.8
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Nitrite-N	EPA 300.0
Nitrite-N	Lachat 10-107-04-1-C
pH	SM 4500-H-B
Selenium	EPA 200.8
Silver	EPA 200.7
Silver	EPA 200.8
Sodium	EPA 200.7
Sulfate	EPA 300.0
Thallium	EPA 200.8
Total Coliform (Treatment and Distribution)	Enz. Sub. SM 9223
Total Coliform (Treatment and Distribution)	MF SM 9222-B
Total Dissolved Solids	SM 2540-C
Trihalomethanes	EPA 524.2
Turbidity	SM 2130-B
Volatile Organic Compounds	EPA 524.2

**Non-Potable Water (Wastewater)**

Analyte	Method
Aldrin	EPA 608
Alkalinity, Total	SM 2320-B
Alpha-BHC	EPA 608
Aluminum	EPA 200.7

**Non-Potable Water (Wastewater)**

Analyte	Method
Aluminum	EPA 200.8
Ammonia-N	Lachat 10-107-06-1-B
Antimony	EPA 200.7
Antimony	EPA 200.8
Arsenic	EPA 200.7
Arsenic	EPA 200.8
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Beta-BHC	EPA 608
Biochemical Oxygen Demand	SM 5210-B
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chemical Oxygen Demand	SM 5220-D
Chlordane	EPA 608
Chloride	EPA 300.0
Chlorine, Total Residual	SM 4500-CL-G
Chromium	EPA 200.7
Chromium	EPA 200.8
Cobalt	EPA 200.7
Cobalt	EPA 200.8
Copper	EPA 200.7
Copper	EPA 200.8
Cyanide, Total	Lachat 10-204-00-1-A
DDD	EPA 608
DDE	EPA 608
DDT	EPA 608
Delta-BHC	EPA 608
Dieldrin	EPA 608
Endosulfan I	EPA 608
Endosulfan II	EPA 608
Endosulfan Sulfate	EPA 608
Endrin	EPA 608
Endrin Aldehyde	EPA 608
Gamma-BHC	EPA 608
Hardness (CaCO <sub>3</sub> ), Total	EPA 200.7
Hardness (CaCO <sub>3</sub> ), Total	SM 2340-B
Heptachlor	EPA 608
Heptachlor Epoxide	EPA 608
Iron	EPA 200.7
Kjeldahl-N	Lachat 10-107-06-02-D
Lead	EPA 200.7
Magnesium	EPA 200.7
Manganese	EPA 200.7
Manganese	EPA 200.8
Mercury	EPA 245.1
Molybdenum	EPA 200.7
Molybdenum	EPA 200.8
Nickel	EPA 200.7
Nickel	EPA 200.8
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Non-Filterable Residue	SM 2540-D
Oil and Grease	EPA 1664

## Certifications and Approvals

**MASSACHUSETTS****Department of Environmental Protection, M-MA-103**

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

**Non-Potable Water (Wastewater)**

<b>Analyte</b>	<b>Method</b>
Orthophosphate	Lachat 10-115-01-1-A
pH	SM 4500-H-B
Phenolics, Total	EPA 420.4
Phenolics, Total	Lachat 10-210-00-1-B
Phosphorus, Total	Lachat 10-115-01-1-C
Phosphorus, Total	SM 4500-P-B,E
Polychlorinated Biphenyls (Oil)	EPA 600/4-81-045
Polychlorinated Biphenyls (Water)	EPA 608
Potassium	EPA 200.7
Selenium	EPA 200.7
Selenium	EPA 200.8
Silver	EPA 200.7
Sodium	EPA 200.7
Specific Conductivity	SM 2510-B
Strontium	EPA 200.7
Sulfate	EPA 300.0
SVOC-Acid Extractables	EPA 625
SVOC-Base/Neutral Extractables	EPA 625
Thallium	EPA 200.7
Thallium	EPA 200.8
Titanium	EPA 200.7
Total Dissolved Solids	SM 2540-C
Total Organic Carbon	SM 5310-B
Toxaphene	EPA 608
Vanadium	EPA 200.7
Vanadium	EPA 200.8
Volatile Aromatics	EPA 602
Volatile Aromatics	EPA 624
Volatile Halocarbons	EPA 624
Zinc	EPA 200.7
Zinc	EPA 200.8